ENGINEERING NEWS-RECORD

S. Engineers build longest ponton bridge of war to carry Ledo Rd. across the Irrawaddy.

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[PUMP TIPS FROM ALLIS-CHALMERS—ONE IN A SERIES]

How to make SHAFTS Last Longer . . .

The Allis-Chalmers "Electrifugal" Pump is a unit-designed pump . . . with both impeller and motor mounted on one shaft and in one frame. The next time you need new pumps . . . look into the extra efficiency, ruggedness and long life of Allis-Chalmers centrifugal pumps . . . the "Electrifugal" . . . and all types for every purpose.

WHERE YOU HAVE an Allis-Chalmers "Electrifugal" Pump . . . shaft and rotor pictured at left . . . you don't have an alignment problem—because *both* impeller and rotor are mounted on *one* shaft.

However, many pumps in use today are coupled to a separate motor, and how well the two are aligned has a lot to do with how long the shaft lasts . . . and the pump and coupling too . . . because misalignment starts all three fighting each other!

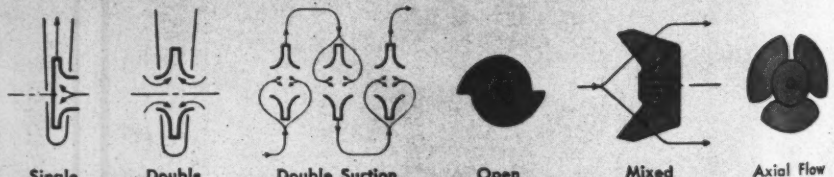
Here are a few tips which will help you get longer life out of pump shafts:

- See that pump and motor coupling flanges are parallel . . . both vertically and axially . . . and that they are kept that way!
- If misalignment recurs frequently, check foundations, piping, bolted connections.
- In the case of boiler feed or other pumps which reach high operating temperatures, be sure that alignment of motor and pump is checked after *both* have been operating. Otherwise they might develop misalignment from unequal expansion.
- If you haven't done so already, send for your *free* copy of "Handbook for Wartime Care of Centrifugal Pumps". Contains *no* advertising. ALLIS-CHALMERS MFG. CO., MILWAUKEE 1, WISCONSIN. A 1707

Tune in the Boston Symphony, Blue Network, every Saturday at 8:30 pm, EWT.

ALLIS-CHALMERS PUMPS

Allis-Chalmers builds all types and variations of pumps shown at right. Capacities from 10 to 150,000 gpm—heads to 2500 lbs.



The Week In Engineering and Construction

NGINEERING NEWS-RECORD • JANUARY 18, 1945 • VOLUME 134 • NUMBER 3

Potential waterway projects total over 4 billion dollars

With a month's notice Corps of Enginers could start construction of $500,000,000 of navigation, flood control and power development work

With the approval of the billion dollar Flood Control Bill on Dec. 22, (*ENR* Dec. 28, 1944, vol. p. 806), the potential backlog of river and harbor, flood control, and multiple-purpose projects that have been adopted by Congress was increased to about three billion dollars. This program is composed of suspended projects that can be resumed whenever conditions permit, of new projects that have never been initiated, and of projects required to complete approved comprehensive basin plans for which additional money authorizations will be required. Pertinent information on this large congressionally-approved program, including character of work, status of detailed construction plans, and total estimated cost by major river basins is given in the table on the next page.

Supplementing this authorized program the estimated dollar volume of projects that are contained in the postwar River and Harbor Bill (S. 35) now pending before Congress, plus flood control and river and harbor projects that have been favorably recommended to Congress but on which action has not yet been taken, increases the over-all potential postwar program for waterway improvements to approximately 4½ billion.

Plans ready for large program

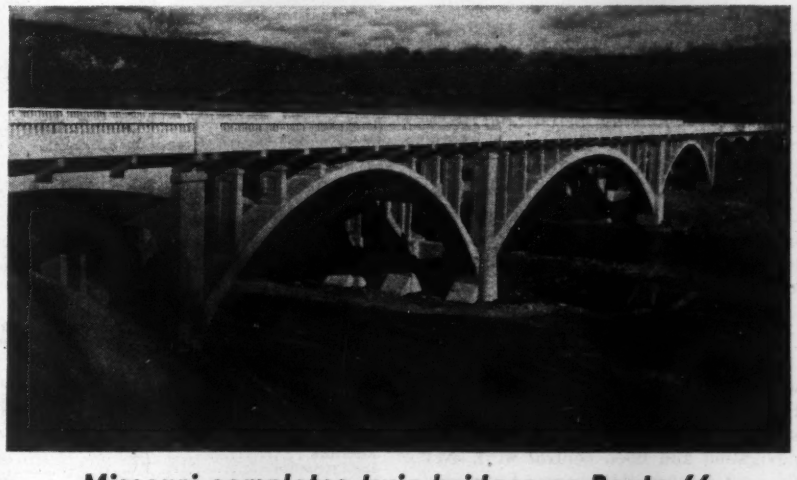
Of the total program, authorized by Congress, detailed construction plans and specifications for a wide variety of work estimated to cost $500,000,000 and distributed generally throughout the country are ready. The amount of work in this advanced stage of readiness is being increased as rapidly as possible consistent with the prosecution of military work, which must and does receive first priority at all times; the record of the Army Engineers in military construction is ample assurance that nothing is allowed to interfere with the war. Although both the funds and personnel available for preparing detailed plans and specifications are now limited, it is expected that the dollar volume of work ready for contract will reach a total of $731,000,000 by late summer of the present year.

This high degree of postwar preparation results from the wisdom of our statesmen in providing money to continue detailed planning as well as from the excellent organizational set-up of the Engineer Department that permits the same engineers when not engaged on military work to apply their energies to preparing for the postwar civil works program. Of course, in the final analysis, these same statesmen are responsible for public expenditures and they will decide how much to spend throughout the country. However, it is safe to assume that the Corps of Engineers will be prepared with plans and data for any size program for which funds may be appropriated.

Many types of work involved

The public works covered by this authorized program, practically all of which will be performed by contract, include a wide variety of structures and types of construction. The numerous approved reservoir projects will involve rolled-earth, rock-fill, and concrete dams varying from small structures for flood detention only to extremely large ones for multiple purpose projects. Power installations will be provided at some dams and at others provisions will be made for power development in the fu-

(*continued on next page*)



Missouri completes twin bridges on Route 66

Located 20 miles west of Rolla on Route 66, which is being improved to provide a 4-lane divided highway for several miles in the vicinity of Fort Leonard Wood (ENR Sept. 24, 1942, vol. p. 412), these twin bridges of identical layout (ENR July 13, 1944, vol. p. 52) have just been completed to carry the dual highway over the Big Piney River in southern Missouri.

Providing a 26-ft. roadway, each crossing consists of a 160-ft. reinforced concrete, open-spandrel arch flanked at either end by a 100-ft. deck arch, plus a 45-ft. concrete deck-girder span at the west end and four 50-ft. spans at the east end.

The work was done by the Missouri State Highway Department, C. W. Brown, chief engineer, and V. W. Enslow, bridge engineer. The Hannibal Contracting Co., Hannibal, Mo., was the general contractor.

ture. The corresponding range in estimated costs of these dams and reservoirs will be from several hundred thousands of dollars to well over a hundred million.

The local protection projects will involve earth levees, concrete walls, pumping stations, channel improvements, and diversions, while navigation projects will include locks, dams, canals, river improvement and corrective dredging, channel stabilization works, breakwaters and jetties. Considering, in addition, the highway and railway relocations necessary by reservoir construction, it is obvious that practically every type of construction work is represented in the program. The primary purposes of the works by the Corps of Engineers are navigation improvement and flood control, but irrigation, power development, abatement of pollution, improvement of recreational facilities, establishment of wild life preserves, and other corollary benefits are included wherever practicable.

In planning public works the Corps of Engineers has always been careful to make its proposals practical. An outstanding example of this procedure is flood control in the alluvial valley of the Mississippi River. About 100 years ago the Army Engineers started collecting and studying data on that river. In the beginning only small amounts of money could be obtained for studies and for improvements.

As time went on and both the population and wealth of the valley multiplied the amounts of money appropriated for improvements was gradually increased. Thus step by step the practical plans of each period have been geared to something better and to a more comprehensive development, the $300,000,000 plan of 1928 for flood control and improvement of the Lower Mississippi River becoming by successive improvement and extension of benefits to hundreds of thousands of additional acres the $860,000,000 project of 1944.

All part of comprehensive plan

In planning and prosecuting all the work covered in the accompanying table the Corps of Engineers will apply lessons and practical methods learned on navigation and flood control work over the past century. All proposed works in the major river basins are integrated into a comprehensive plan, which is designed to secure ultimately the maxi-

AUTHORIZED RIVER AND HARBOR AND FLOOD CONTROL PROJECTS

*Purpose: F.C. signifies flood control; N.—navigation; P.—power; W.C.—water conservation.
**Estimated cost of remaining work.

Projects	Purpose*	Dollar volume of projects for which construction plans are: Available	To Be Prepared	Additional authorization required for completion of approved basic plan	Estimated federal cost
Merrimack River Basin, N. H. & Mass.					
Reservoirs	F.C.	$3,950,000	$4,632,000	$	$8,582,000
Local protection	F.C.	245,000			245,000
Blackstone River Basin, Mass. & R. I.					
Reservoirs	F.C.		1,070,000		1,070,000
Local protection	F.C.		3,117,000		3,117,000
Housatonic River Basin, Conn.					
Reservoirs	F.C.		5,151,000		5,151,000
Connecticut River Basin, Vt., N. H., Conn., & Mass.					
Reservoirs	F.C.	19,635,000	35,524,000	10,801,000	55,159,000
Local protection	F.C.	1,020,000			1,020,000
River and Harbor Improvements	N.	131,000			131,000
Pawtuxet River Basin, R. I.					
Local protection	F.C.	277,000	1,311,000		1,588,000
Thames River Basin, Conn. & Mass.					
Reservoirs	F.C.	5,470,000	7,090,000		12,560,000
Local protection	F.C.	646,000			646,000
Lake Champlain Basin, Vt.					
Local protection	F.C.		2,428,000		2,428,000
Hudson River Basin, Vt. Mass., & N. Y.					
Local protection	F.C.	1,879,000	291,000		2,170,000
River and Harbor Improvements	N.	2,832,000	4,258,000		7,090,000
Susquehanna River Basin, N. Y. & Pa.					
Reservoirs	F.C.	10,866,000	9,846,000		20,712,000
Local protection	F.C.	3,501,000	3,619,000		7,120,000
North Atlantic Coastal Area					
River and Harbor Improvements	N.	21,107,000	3,250,000		24,357,000
Middle Atlantic Coastal Area, Va., W. Va., N. C., & S. C.					
Reservoirs	F.C.,N.,P.		124,000,000	87,860,000	124,000,000
Local protection	F.C.		922,000		922,000
River and Harbor Improvements	N.	2,982,000			2,982,000
South Atlantic Coastal Area, Ga.					
Reservoirs	F.C.,P.,N.		140,400,000		140,400,000
River and Harbor Improvements	N.	54,195,000			54,195,000
Gulf Coastal Area, La. & Tex.					
Reservoirs	F.C.,P.		18,681,000		18,681,000
Local protection	F.C.	7,430,000	25,560,000		32,990,000
River and Harbor Improvements	N.	13,668,000			13,668,000
Red-Ouachita River Basin, Tex., Okla., La. & Ark.					
Reservoirs	F.C.,P.	9,402,000	11,369,000		20,771,000
Local protection	F.C.	488,000	4,163,000		4,951,000
Arkansas River Basin, Colo., Kans., Okla., & Ark.					
Reservoirs	F.C.,P.,W.C.	58,237,000	30,717,000	46,454,000	88,954,000
Local protection	F.C.		15,426,000		15,426,000
White River Basin, Mo. & Ark.					
Reservoirs	F.C.,P.	62,600,000	72,866,000	74,966,000	135,466,000
Local protection	F.C.	2,848,000			2,848,000
Ohio River Basin					
Reservoirs	F.C.,P.,N.	42,660,000	330,175,000	432,469,000	372,835,000
Local protection	F.C.	27,118,000	112,516,000		139,634,000
River and Harbor Improvements	N.	7,043,000			7,043,000
Great Lakes Basin, N. Y. & Mich.					
Reservoirs	F.C.		5,960,000		5,960,000
Local protection	F.C.	4,042,000	175,000		4,217,000
River and Harbor Improvements	N.	4,880,000	1,148,000		6,028,000
Missouri River Basin					
Reservoirs	F.C.,P.,N.,W.C.	41,360,000	436,200,000	339,200,000	477,560,000
Local protection	F.C.	350,000	90,935,000		91,285,000
River and Harbor Improvements	N.	19,344,000	2,506,000		21,850,000
Red River of the North, S. D., N. D., & Minn.					
Reservoirs	F.C.		810,000		810,000
Local protection	F.C.		3,022,000		3,022,000
Upper Mississippi River Basin					
Reservoirs	F.C.,P.		83,948,000	70,548,000	83,948,000
Local protection	F.C.	14,016,000	12,200,000	2,600,000	26,616,000
River and Harbor Improvements	N.	8,040,000	11,590,000		19,630,000

(Continued on next page)

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President asks for appropriation of $279,000,000 for public works

Actual construction to be restricted to projects furthering the war effort, but planning for future work is recommended

The President's message to Congress Jan. 9, transmitting the budget for fiscal year beginning July 1 next, recommended appropriations of $279,000,000 for general public works, which $83,000,000 more than the amount appropriated for the current year. In explanation the President said:

"Balances brought forward from public works appropriations of several years ago are about used up. Even with the recommended new appropriations, the program as a whole will be limited; actual construction will continue to be restricted to those projects which contribute to the war effort. Because of the completion of some of this war-related construction expenditures are estimated to decrease slightly in the next fiscal year.

"I recommend, however, appropriations for the planning of public works which the Congress has already authorized. We must continue to stock up a shelf of meritorious construction and development projects to be undertaken as man power and material become available. By the end of the current fiscal year detailed plans will be ready for about $1,500,000,000 of federal public works, and also will be substantially ready for a billion-dollar program of federal aid highways, half of this road program to be financed with state funds. We need a larger shelf of detailed plans in order to be prepared for the postwar period. Hence appropriations for 1946 are recommended to make possible the completion of additional plans for highways, flood control, river development, stream pollution control, power transmission, reclamation, hospital and other construction, as authorized by law. Further requests for funds for detailed planning of Federal projects will be made on Congressional authorization.

Plans completed or in design stage

"Plans have been completed or are in the design stage for about three billion dollars of state and local public works, excluding federal-aid highways. The war mobilization and reconversion act authorizes funds for federal loans and advances which would make it possible to place further projects on the shelf of planned public works. The extent to which federal funds are needed to enable states and localities to plan adequately for useful public works is now being re-examined, and I shall soon transmit a new recommendation concerning funds for these purposes.

"In addition, programs are being developed for Federal loans and guaranties to stimulate private construction after the war. Guaranties and loans already available under the service men's readjustment act will encourage residential, commercial and farm building."

Waterway projects total over 4 billion dollars

(Continued from preceding page)

development of water resources. never has been, and probably will be, practicable to formulate launch a program based on a plan would fulfill the dream of perfection for all time. Nothing would ever be accomplished if a beginning had to such a plan. On the other hand if us practical step by step plans are made with vision and carried out as they become warranted with latitude for future perfection the greatest benefit is derived by the people. The outlined program of postwar work is based upon just such sound planning and contemplates successive improvement in developing and utilizing our water resources.

Projects	Purpose*	Dollar volume of projects for which construction plans are: Available	To Be Prepared	Additional authorizations required for completion of approved basin plan	Estimated federal cost
Mississippi River Basin					
ver Mississippi River project	F.C.,N.	.....	386,755,000	.....	386,755,000
l protection	F.C.	.....	8,765,000	.....	8,765,000
nde Basin, Colo.					
l protection	F.C.	.....	68,000	.....	68,000
lo River Basin, Ariz. & N. Mex.					
rvoirs	F.C.	.....	3,202,000	.....	3,202,000
l protection	F.C.	.....	258,000	.....	258,000
Salt Plains Basin					
l protection	F.C.	.....	281,000	.....	281,000
quias & San Gabriel River Basin, Cal.					
rvoirs	F.C.	16,983,000	.....	.....	16,983,000
l protection	F.C.	13,230,000	109,952,000	118,843,000	123,182,000
r and Harbor Improvements	N.	7,100,000	.....	.....	7,100,000
Ana River Basin, Cal.					
rvoirs	F.C.	.....	16,486,000	3,798,000	16,486,000
l protection	F.C.	.....	15,098,000	7,043,000	15,098,000
mento-San Joaquin River Basin, Cal.					
rvoirs	F.C.,W.C.	510,000	101,989,000	46,335,000	102,499,000
l protection	F.C.	.....	21,573,000	.....	21,573,000
r and Harbor Improvements	N	.....	1,640,000	.....	1,640,000
Pacific Coastal Area, Cal.					
l protection	F.C.	.....	2,941,000	.....	2,941,000
r and Harbor Improvements	N.	658,000	.....	.....	658,000
mbia River Basin, Oreg.					
rvoirs	F.C.,P.,N.	26,082,000	42,440,000	40,540,000	68,522,000
l protection	F.C.	.....	807,000	.....	807,000
r and Harbor Improvements	N.	90,000	.....	.....	90,000
bia & Snake River Basin, Idaho, Wash., & Oreg.					
l protection	F.C.	567,000	1,550,000	.....	2,117,000
r and Harbor Improvements	N.	1,438,000	854,000	.....	2,287,000
Pacific Coastal Area, Oreg. & Wash.					
l protection	F.C.	1,963,000	1,596,000	.....	3,559,000
ries					
l protection	F.C.	.....	73,000	.....	73,000
r and Harbor Improvements	N.	1,109,000	.....	.....	1,109,000
Total		$523,627,000	$2,331,564,000	$1,281,457,000	$2,855,191,000
ded Projects					
n and reservoir projects		$153,292,000**	.....	.....	$153,292,000**
l protection projects		54,657,000**	.....	.....	54,657,000**
Grand Total		$731,576,000	$2,331,564,000	$1,281,457,000	$3,063,140,000

Overseas Dispatch

Waldo G. Bowman, editor of *Engineering News-Record*, tells of Army Engineer operations in England in a report to be published next week. His story and photos reveal the role of construction men in keeping the invasion armies on the move.

Mr. Bowman, who went abroad early in December on his second tour of the European Theater, is now in France. From here he will report on port and railroad reconstruction as well as the activities of Combat Engineer troops.

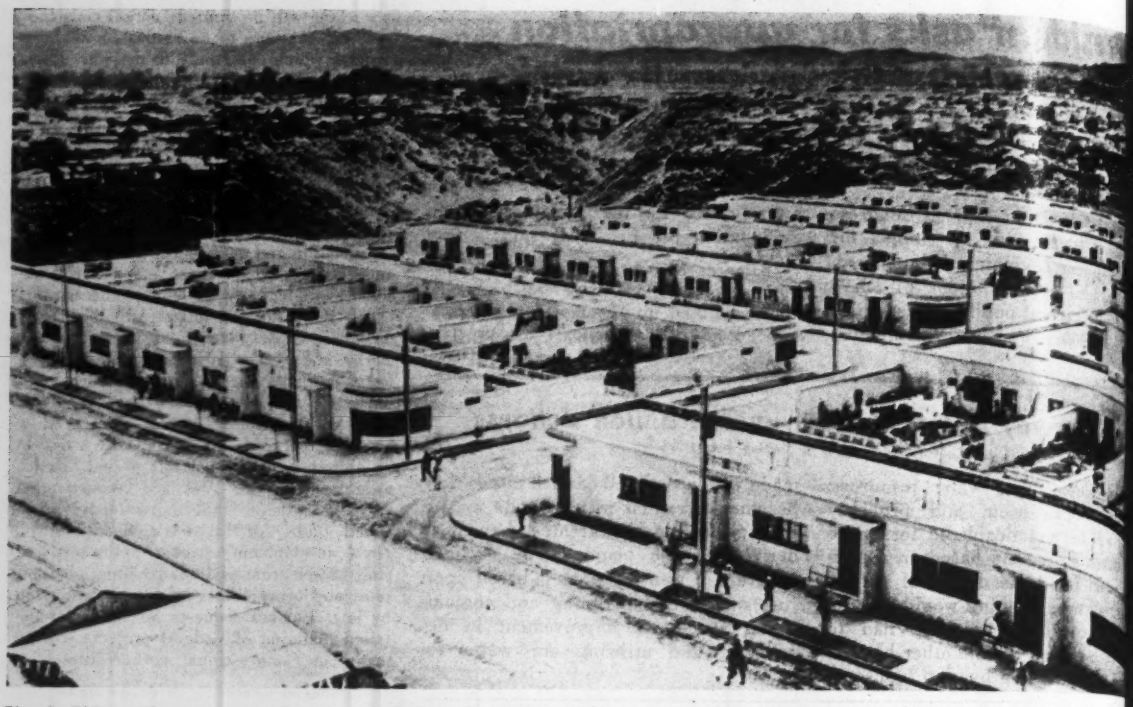


Fig. 1. This modern low rent housing project in Guatemala City covers eight blocks and consists of 128 dwelling un

Low Cost Housing in Guatemala City

Looking toward the development of modern housing for its low income population group, Guatemala City has completed an experimental community project that has several interesting and unusual features. Known as "Colonia 25 de Junio", the project consists of 128 dwelling units, paved streets and sidewalks, and other essential utilities—all within close proximity to markets, recreational centers and industrial developments.

Designed in the best Spanish tradition, and of concrete and brick construction, the orientation of the houses is of special interest. There are sixteen dwellings to the block, eight facing each street. The block is divided into two sections by a narrow street or passageway, and the rear of the houses face on this street (Fig. 4), thus there are four large corner houses and twelve small ones to the block. The project embraces eight blocks with a total of 32 large houses and 96 smaller uni Each home has a patio, sufficient large to accommodate future additio to the dwelling, and is separated fr its neighbor by a common garden wa Incorporated in the design of the co ner houses is a room which can be us as a small store (Fig. 2).

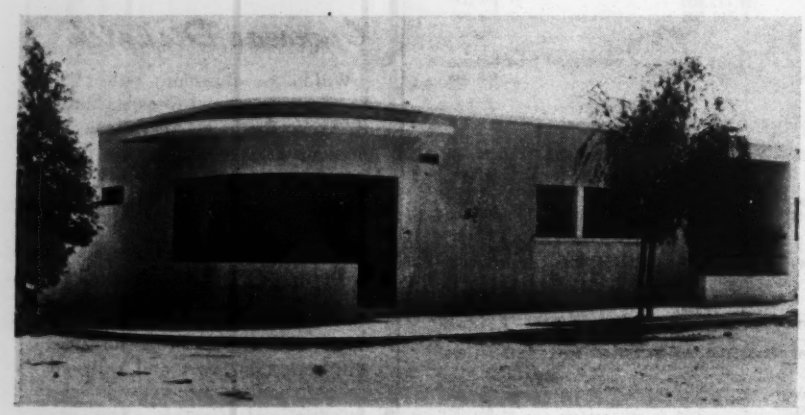


Fig. 2. The large houses located at the corner of each block are so designed as to provide living space at the rear and a small store in front.

How the project was financed

The colony was built to better t housing conditions of low incom workers and not as a profit ventur Financing was accomplished by a seri of mortgage bonds, all of which we bought by the Banco Central Guatemla. A portion of these bonds amortized every six months. Total c of the houses was as follows: sm type, $1,360 and $1,700; large ty $2,140 and $2,700. All houses of ea type are identical. The difference cost is attributed to the fact that the houses were not built at the sa time.

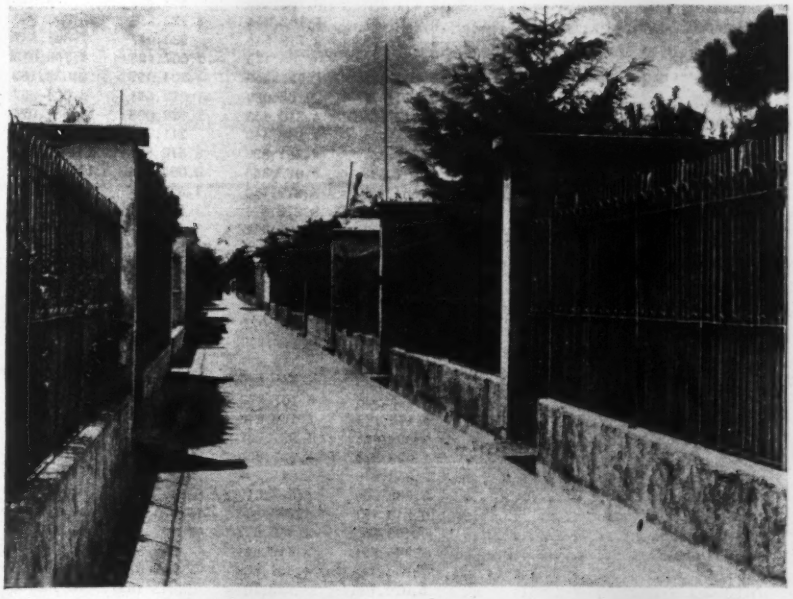
Monthly payments on the small houses, depending on the age of t beneficiary, are $13.50 and $17; the larger type houses the payment $19.50 and $30, per month. The monthly payments cover the followin Amortization of the capital; interest the capital at 5 percent; a life ins

3. A street in "Colonia 25 de Junio" showing arrangement of row houses, which are entered direct from the sidewalk.

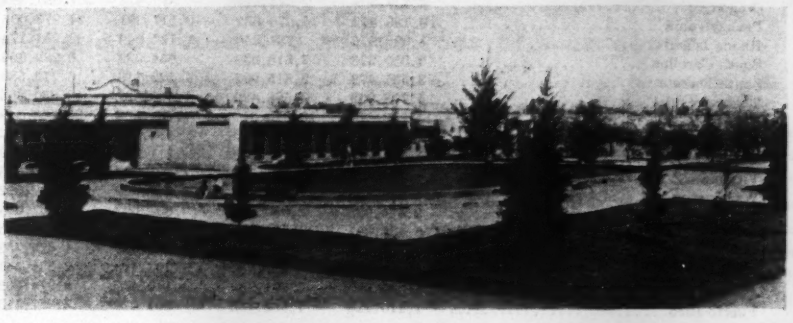
e policy issued in the same amount he cost of the house; administrative enses, and municipal taxes.

he insurance policy is issued to tect the family against loss of the se in case of the death of the tenant r to the full payment of the con-t. In case of death, the Credito otecario Nacional collects the unt still due for the house and any erence is paid to the heirs. In case beneficiary lives to pay off his con-t, he may continue to carry his life rance if he so desires.

everal new projects are under con-ratoin by the Banco Central de temala for postwar construction.



4. Each block is divided into two ions by a narrow street or pass-way, as shown above, and the patio of each house this street. Note n gutters.



5. Ample parks and recreational cilities are provided in close prox-ity to the housing development.

States' share of federal aid for roads is announced by PRA

Distribution of first $500 million of $1.5 billion provided by Highway Act passed by last Congress is revealed.

The Public Roads Administration of the Federal Works Agency has announced the apportionment of the first $500,000,000 of $1,500,000,000 in accordance with the Federal-Aid Highway Act of 1944, which authorized the most all-embracing road construction program ever undertaken by the federal government in cooperation with the states. See table below.

The act provides that the $500,000,000 be apportioned as follows: $225,000,000 for the federal-aid highway system, apportioned on a basis of one-third in proportion to area, one-third in proportion to population and one-third in proportion to mileage of rural free delivery and star routes; $150,000,000 for secondary or feeder roads, apportioned on the same formula as the funds for the Federal-aid system except rural population, which includes the population of places of less than 2,500, is substituted for total population; and $125,000,000 for the federal-aid highway system in urban areas, apportioned on the proportion that population of urban places of 5,000 or more bears to total population of such urban areas.

The chief purpose of the new legislation is to catch up with road work which normally would have been done if the war had not curtailed the use of materials and manpower. Postwar employment being an added objective, efforts are being made to get the approved road projects advanced to the contract stage in order that men can be put to work as soon as the war ends.

Some economists have assumed that the wage and price conditions that are likely to exist immediately after hostilities cease may approximate those that prevailed in 1940–41. If this prove correct, it is believed that the highway construction made possible by this legislation should provide about 19,350 man-years of direct, and 43,120 man-years of indirect employment for each $100,000,000 expended.

As noted in last week's issue, only $100,000,000 of this money will become immediately available upon appropriation by Congress, that money to be used for plans, surveys and purchase of right-of-way. The remainder of the first year's apportionment will not be available until Congress declares that the war emergency has been relieved.

APPORTIONMENT OF FIRST $500,000,000 OF $1,500,000,000 IN ACCORDANCE WITH THE FEDERAL-AID HIGHWAY ACT OF 1944.

State	Federal-Aid Highway System	Secondary or Feeder Roads	Urban Highways	Total
Alabama	$4,711,985	$3,732,285	$1,303,288	$9,747,558
Arizona	3,231,050	2,234,825	262,168	5,728,043
Arkansas	3,854,270	3,103,100	558,221	7,515,591
California	9,018,749	5,162,254	8,122,233	22,303,236
Colorado	4,039,595	2,718,345	933,647	7,691,587
Connecticut	1,395,343	766,175	2,607,495	4,769,013
Delaware	1,096,875	731,250	204,057	2,032,182
Florida	3,236,627	2,168,089	1,599,641	7,004,357
Georgia	5,648,564	4,310,453	1,622,008	11,581,025
Idaho	2,785,964	1,948,442	211,799	4,946,205
Illinois	8,847,357	4,761,820	9,510,696	23,119,873
Indiana	5,402,363	3,622,366	3,065,734	12,090,463
Iowa	5,567,260	3,979,710	1,592,107	11,139,077
Kansas	5,660,742	3,973,471	1,107,219	10,741,432
Kentucky	4,203,011	3,405,116	1,299,529	8,907,656
Louisiana	3,371,110	2,524,469	1,531,578	7,427,157
Maine	1,948,956	1,404,017	560,538	3,913,509
Maryland	1,830,939	1,170,515	1,790,081	4,791,532
Massachusetts	2,942,968	786,683	6,612,615	10,342,266
Michigan	6,826,974	4,129,025	5,682,433	16,638,432
Minnesota	6,055,101	4,170,973	2,206,152	12,432,226
Mississippi	4,041,077	3,333,877	600,115	7,975,069
Missouri	6,660,223	4,562,550	3,151,158	14,373,931
Montana	4,547,996	3,107,277	307,665	7,962,938
Nebraska	4,476,165	3,159,246	782,776	8,418,187
Nevada	2,868,043	1,921,867	60,613	4,850,523
New Hampshire	1,096,875	731,250	475,000	2,303,125
New Jersey	2,863,970	1,041,395	5,527,987	9,433,352
New Mexico	3,636,969	2,517,619	257,261	6,411,849
New York	10,840,121	4,275,825	18,776,072	33,892,018
North Carolina	5,433,060	4,453,613	1,492,475	11,379,148
North Dakota	3,347,724	2,412,044	214,578	5,974,346
Ohio	7,904,748	4,657,668	7,539,574	20,101,990
Oklahoma	5,070,405	3,723,761	1,348,164	10,142,330
Oregon	3,728,908	2,544,582	810,873	7,084,363
Pennsylvania	9,185,473	5,270,332	10,517,201	24,973,006
Rhode Island	1,096,875	731,250	1,123,049	2,951,174
South Carolina	3,050,328	2,518,039	654,032	6,222,399
South Dakota	3,535,472	2,515,992	222,116	6,273,580
Tennessee	4,768,902	3,668,429	1,593,037	10,030,368
Texas	14,258,270	10,043,311	4,464,068	28,765,649
Utah	2,531,450	1,685,875	433,731	4,651,056
Vermont	1,096,875	731,250	211,884	2,040,009
Virginia	4,114,033	3,191,318	1,491,272	8,796,623
Washington	3,536,808	2,394,765	1,467,429	7,399,002
West Virginia	2,474,035	2,080,317	807,692	5,362,044
Wisconsin	5,434,891	3,681,127	2,654,468	11,770,486
Wyoming	2,795,630	1,897,080	133,049	4,825,759
Hawaii	1,096,875	731,250	393,416	2,221,541
District of Columbia	1,096,875	731,250	1,146,477	2,974,602
Puerto Rico	1,110,126	1,132,458	834,529	3,077,113

Virginia is ready for highway expansion

With more than $15,000,000 in the bank for general highway purposes and upwards of $18,600,000 in state and federal money already allotted for construction "some time after June 30, 1945," the Virginia State Highway Department is said to be in solid financial condition for postwar expansion of Virginia's network of roads.

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Benefits will offset cost of Mt. Morris Dam

Army Engineers are ready to proceed with detailed plans for postwar construction, approved by the President and Congress, of a reservoir at Mount Morris, N. Y., 20 miles from Rochester, to fit into a comprehensive development of water resources of the Genesee River basin, to cost $5,360,000.

The dam will be an earth-fill structure, forming a reservoir of 116,000 acre-ft. of storage capacity. Annual charges of $244,800 entailed in construction, it is said, would be offset by annual earned benefits of $275,000.

New FWA department is established to handle war public works

On par with PRA and PBA branch, the Bureau of Community Facilities is expected to distribute federal aid to local planning groups

Aimed at the twofold purpose of reamlining the war construction and rvice activities of the Federal Works gency and at getting that department lly organized to distribute any federal nds Congress sees fit to provide for cal planning groups, Maj. Gen. Philip Fleming, administrator, has estabhed the Bureau of Community Facilies as a new organization in the FWA. he new division is planned for the spefic purpose of carrying out work auorized under the Lanham Act and reaces two former FWA branches, the ar Public Services and the War Pubc Works division.

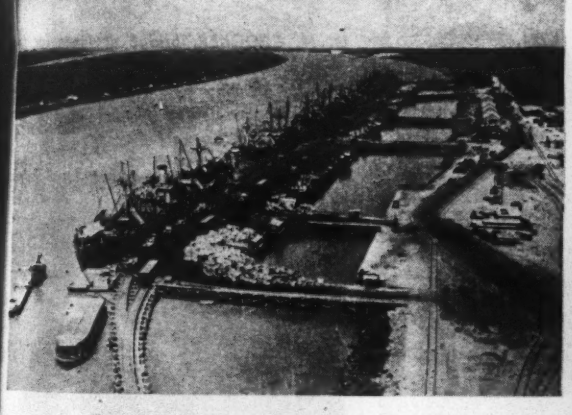
Although not as well known as the ublic Roads Administration and the ublic Buildings Administration, the ther two organizations of FWA with hich the new organization will have qual status, the replaced branches in heir four years of existence have been esponsible for the expenditure of more han a half billion dollars of federal unds. The money of the War Public Works has been spent primarily for onstruction and enlargement of new chool facilities, for more hospital space, nd for similar activities in cities called upon to deal with a great influx of war workers. The War Public Services division, allotted funds to help war-impacted communities to pay maintenance and operation costs of needed public facilities such as providing more policemen, firemen, schoolteachers, and child care centers.

The new Bureau of Community Facilities will not only take over these operations, which are decreasing, although still extensive, but it will also distribute any funds Congress makes available to FWA for loans or advances to city, county, and other local governments for the planning of postwar public works other than highways. President Roosevelt requested the last Congress to provide $75,900,000 for such work, but that body preferred to let the new Congress deal with the matter. He is now expected to request at least that amount and perhaps a larger sum. The new bureau probably will distribute the money in a manner that makes the money advanced a grant if the city completes the planning outlined but fails to build the project, while if the work is carried out the local body will be asked to repay the money.

George H. Field, a civil engineer and graduate of the University of Wisconsin, has been named commissioner of the new bureau. Following some time in private construction work, he joined the federal government in 1933, serving as FWA regional director for six Midwestern states before going to Washington as assistant to the commissioner.

In setting up the new bureau Mr. Field plans three major divisions: administration, war public works, and war public services. The second is the one of most interest to the construction industry. It is headed by Rufe B. Newman, Jr., who will be assisted by Garland L. Rounds, director of engineering; Stephens W. Burns, director of construction; and Thomas G. Mooney, director of the priorities division.

All amendments to the regulation covering rental prices and operating and service maintenance charges for construction and road maintenance equipment have been incorporated into a single document and issued in the form of a collation of the regulation, the Office of Price Administration announced last week.



U. S. Signal Corps photo

Back door route to Russia delivers 4½ million tons of war goods

The shipment of more than 4½ million tons of war implements and goods from American factories to Russia through the Persian Corridor has been announced by Maj. Gen. Donald H. Connolly, Commanding General, Persian Gulf Service Command. This was made possible by U. S.-built ports, railroads and highways (ENR Oct. 7, 1943, vol. p. 520).

At the left is a view of Liberty ships alongside Khorramshahr docks, typical of the great ports that were created by American construction men with bare hands and what little equipment could be brought across a dangerous 13,000-mile sea route from the U. S.

From the sea, the Russian supply road follows a serpentine alignment, in order to climb to an elevation of 8,000 ft. Over 400 miles of the road traverses the arid mountains of northern Iran. Part of that route is as shown on the right.

In 1942 construction on the dock facilities was started by the American construction firms of Foley Brothers and Spencer, White and Prentis. Early in 1943, when labor and equipment supply from the States became too difficult for a civilian set-up to handle, the work was turned over to the Persian Gulf Service Command.

MEN AT WORK

CAPTAIN H. G. DEWEY, JR., chief of construction, and KARL A. DUPES chief of planning, both of the Clinton sub-office of the U. S. Waterways Experiment Station, Vicksburg, Miss., discuss a field problem on the table relief model of the $3,000,000 hydraulic model of the Mississippi River and its tributaries being constructed with prisoner-of-war labor at Clinton, Miss. The area shown in white at the bottom of the model represents the existing model of the lower Mississippi River at Vicksburg, Miss., on which studies have been made during the past eight years.

Work of the A. I. Savin Const. Co., E... Hartford, Conn., on enlargement of the spi... way of Saluda Dam in South Carolina ... under the able direction of LLOYD F... McCARTHY, general superintendent.

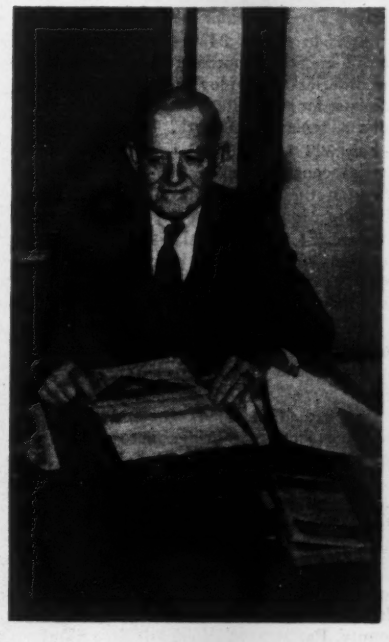
JACK E. HARNS, chief engineer of the new MacArthur lock at Sault Ste. Marie, Mich., receives the Exceptional Civilian Service Award, from BRIG. GEN. EDWIN W. JONES, while COL. H. A. MONTGOMERY, division engineer of the Great Lakes Engineer Division, U. S. Army Engineers, Chicago (left) and COL. ALLISON MILLER, district engineer, Detroit (right) look on. This meritorious emblem, highest War Department award given civilian employes, was presented to Mr. Harns in recognition of his outstanding services as chief engineer throughout the construction of this $14,000,000 lock in the record-breaking time of 14 months. Harns is a civil engineering graduate of Purdue University, class of 1922.

C. N. CROCKER, bridge engineer for the Georgia State Highway Department, reports postwar planning by his office is slow because of the limited number of engineers available for this work.

wly elected officers of the Illinois Water Plant Operators at the recent annual meeting are, left to right: E. M. CRAIG, water super-ndent of Zion, vice-chairman; PAUL HARRIS, superintendent of water at Herrin, chairman; and LEWIS S. DOREN, manager of the vately owned Pekin Water Works Co., secretary. At extreme right is W. J. DOWNER, chief sanitary engineer, Illinois state depart-t of public health, whose department sponsored the conference.

EY WOODS, chief of the channel section, Vicksburg District, U. S. Army Engineers (center) inspects some recently installed concrete revetment along the Mississippi River, accompanied by CHAS. C. PHILLIPS, chief of the construction section, and MAJOR AUSTIN B. SMITH, chief of dredging section; both of Mississippi River Commission.

Soon to complete 25 years of service with the Public Roads Administration, J. T. MARSHALL, who now has the title of senior highway engineer, is head of the PRA organization in Georgia with offices at Atlanta.



During last session Congress passed many laws of engineering interest

Appropriations included a $1½ billion highway program, $500,000,000 for flood control, and large amounts for war construction.

Although the 78th Congress was noteworthy because of the bills it failed to pass in its closing months—including the St. Lawrence waterway proposal and the Rivers and Harbors bill—nevertheless that Congress in its second session, which ended Dec. 19, made into law many bills of interest to the construction industry. This work is comparable with the large number of bills passed during the first session and reported in *ENR* Feb. 24, 1944, vol. p. 240.

Enactments during the 1944 session included the following:

Public Law 236 (H.R. 2580)—gives Congressional consent to a compact entered into by the states of South Dakota and Wyoming relating to the waters of the Belle Fourche River Basin.

Law 446 (H.R. 2725)—authorized the acquisition of additional lands and flowage easements for the Pleasant Hill Reservoir in Ohio.

Law 225 (H.R. 2912)—authorizes the charging of tolls for the passage or transit of government traffic over the Golden Gate Bridge.

Law 325 (H.R. 3028)—extends the time for constructing a bridge across the Mississippi River at Sauk Rapids, Minn.

Law 546 (H.R. 3429)—amends section one of an act authorizing the Secretary of the Interior to employ engineers and economists for consultation purposes on important reclamation work.

Law 329 (H.R. 3570)—provides for the partial construction of the Hungry Horse Dam on the South Fork of the Flathead River in Montana.

Law 224 (H.R. 3741)—authorizes the Secretary of the Navy to proceed with $281,060,000 of construction of naval shore facilities.

Law 404 (H.R. 4041)—amends the act relating to the construction of a bridge across the Missouri River at Nebraska City, Nebr.

Law 326 (H.R. 4054)—extends the time for constructing a bridge across the Calcasieu River at Lake Charles, La.

Law 450 (H.R. 4206)—authorizes the construction of a free highway bridge across the Monongahela River in Allegheny county, Pa.

Law 445 (H.R. 4207)—authorizes the construction of a free highway bridge across the Monongahela River in Allegheny county, Pa.

Law 289 (H.R. 4381)—authorizes the Secretary of the Navy to spend one billion dollars for bases in the Pacific and $60,000,000 for shore facilities in the United States.

Law 534 (H.R. 4485)—authorizes the construction of flood control projects and is expected to cost one billion dollars.

Law 318 (H.R. 4793)—provides $12,000,000 for emergency flood control work made necessary by recent floods.

Law 412 (H.R. 4803)—extends the time for constructing a bridge across the Mississippi River at Memphis, Tenn.

Law 537 (H.R. 4910)—authorizes the Atchison, Topeka and Santa Fe R.R. to convey to the States of Arizona and California for public highway purposes the Red Rock Bridge across the Colorado River near Topock, Ariz.

Law 556 (H.R. 5206)—authorizes the Belfry Coal Co. to construct a suspension bridge conveyor across the Tug Fork of the Big Sandy River at or near Sprigg, W. Va.

Law 526 (S. 1159)—creates City of Clinton (Iowa) Bridge Commission and authorizes it to construct a bridge across the Mississippi.

Law 227 (S. 1255)—reenacts the act creating the Arkansas-Mississippi Bridge Commission, and authorizes the commission to construct a bridge across the Mississippi at Friar Point, Miss.

Law 228 (S. 1504)—extends the time for completing a railroad bridge across the Missouri River at Randolph, Mo.

Law 517 (S. 1571)—provides that the Continental Divide Tunnel of the Colorado-Big Thompson project be known as the Alva B. Adams Tunnel.

Law 337 (S. 1660)—grants Congressional consent to the Minnesota Department of Highways and Crow Wing County to construct a free highway bridge across the Mississippi at Brainerd, Minn.

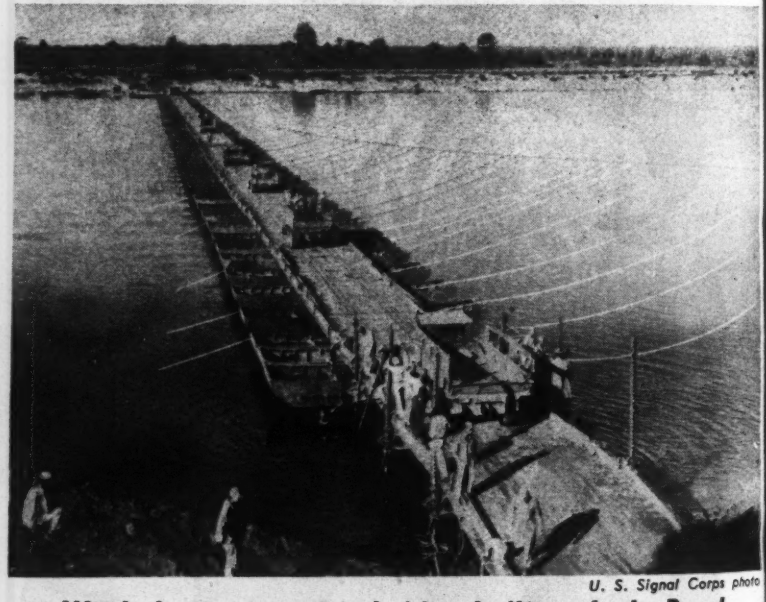
Law 257 (S. 1387)—extends the time for the States of Montana, North Dakota, and Wyoming to negotiate and enter into a compact for division of Yellowstone River waters.

Law 521 (S. 2105)—supplements the Federal-Aid Road Act and authorize appropriations of $1,500,000,000 for postwar highway construction.

Law 420 (S. 1934)—provides for abandonment of a seaplane channel and basin project in Boston Harbor, Mass., which was authorized Oct. 17, 1940.

Law (H.R. 4346)—appropriates $115,000,000 to Federal Works Agency for community facilities, $31,650,000 to Veteran's Administration for hospital facilities, $250,000 to Bureau of Reclamation for Colorado River improvements and $268,000 to War Department for sanitation work in Panama Canal Zone.

(*Continued on next page*)



U. S. Signal Corps photo

War's longest ponton bridge built on Ledo Road

Supporting the Allied push into Burma, the U. S. Engineers have built what is reported to be the longest ponton bridge of this war. The crossing, 1,200 ft. long, was constructed to carry the Ledo Road across the Irrawaddy River. With the aid of 60 Engineer troops, the bridge was completed and ready for traffic within the short time of 14 hr. and 45 min. Note the cable anchorage system on the right side of this bridge.

The bridge is said to be exceeded in length by only two other similar structures, one built in 1864 across the James River in Virginia by troops of Gen. U. S. Grant to effect the taking of Richmond; the other built in 1919 across the Rhine by U. S. Engineers of the Army of Occupation following the first World War.

New laws enacted of engineering interest

(Continued from preceding page)

Law 311 (S. 1771)—appropriates $65,000,000 for the U. S. Navy for additional ordnance manufacturing facilities; includes some new construction.

Law 522 (S. 2194)—authorizes $50,000,000 appropriations for addition ordnance manufacturing facilities, including new construction and enlargement of existing facilities.

Law 392 (S. 1947)—amends the National Housing Act by increasing authorization from 1.6 billion dollars to 1.7 billion.

Law 454 (S. 2137)—names the lake formed by Denison Dam Lake Texoma.

Law 369 (H.R. 4697)—provides large amounts for Department of Interior work for year ending June 30, 1945, including $485,000 for constructing transmission line from Grand Coulee Dam to Brewster, Wash.; $950,000, Indian reservation roads; $2,250,000, Deschutes project; $960,200, Central Valley project; $1,437,000, Colorado-Big Thompson project; $4,300,000, Anderson Ranch Dam; $2,500,000 Tucumcari project; $1,045,000, Lugert-Altus project; $700,000, Yakima project; $875,000, surveys and investigations of proposed reclamation projects; and $1,700,000, water conservation and utilization projects. Law also provides $1,510,000 for gaging streams and $1,250,000 for continuation of construction of Richardson Highway in Alaska.

Law 529 (H.R. 5587)—makes appropriations to supply deficiencies in certain appropriations for year ending June 30, 1945, and provides supplemental appropriations. Appropriations include: $12,000,000 to Federal Works Agency; $835,000 to National Advisory Committee for Aeronautics for construction at Langley Field, Va., and $3,910,000 for construction and equipment at the aircraft engine research laboratory, Cleveland, Ohio; $15,000,000 to National Housing Agency for war housing; $10,571,000 to Veterans Administration for hospital facilities; $1,045,000 additional for Colorado-Big Thompson project; $1,900,000 for Columbia Basin project; $421,000 for Yakima project; $300,000,000 to Navy's Bureau of Yards and Docks, including $50,000,000 by transfer; $7,230,000 for floor control, and $2,780,000 for rivers and harbors work.

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Senate bill calls for $1.5 billion naval facilities

Recently introduced in the Senate is a bill (2.208) which would authorize the Secretary of the Navy to proceed with 1.5 billion dollars of naval shore facilities. The bill calls for the following work: Ship repair and laying-up facilities, $230,222,000; fleet training facilities, $12,000,000; aviation facilities, $74,500,000; storage facilities. $19,950,000; Marine Corps housing and training, $14,190,000; ordnance facilities, $65,500,000; personnel training and housing facilities, $40,022,000; hospital facilities, $28,519,000; shore radio facilities, $3,230,000; naval research laboratory, $225,000; miscellaneous structures and facilities, $41,265,000 and advance base construction, $986,000,000.

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Baltimore and Rochester revamp engineer depts.

A re-organization of the department of public works of Baltimore, Md., to provide titles and salaries that fit the work actually performed is being carried out under the direction of Chief Engineer Nathan L. Smith with the authority of the Board of Estimates. Mr. Smith said he found that many salaried workers with engineering titles were doing clerical or other work having nothing to do with engineering, but were receiving the salaries of the engineering classification.

When the plan is fully carried out every salaried worker will have a title that describes the work done and will be paid in accordance with the salary scale appropriate to the work.

In addition the plan provides for the creation of three new titles in each bureau; deputy bureau head, a division head, and assistant division head. Employes already doing the work of these posts are to be given a new title and in some cases small salary increases.

Complete reorganization of the city engineering division of the Public Works Department of Rochester, N. Y., with "a promotional system for career men", has been announced by Commissioner August H. Wagener, effective Jan. 16.

City Engineer Kenneth Knapp continues in charge, and under him will be five engineers with these specific duties: H. Remington Kohler, in charge of building design, sewers and municipal improvements; Elmer Oliver, in charge of tests; Harold McElwain, in charge of inspection and construction; Elmer Walker, in charge of special studies; Walter Hughes, in charge of research.

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Charles D. Vail dies; Colorado road engineer

Charles D. Vail, 76, Colorado highway engineer for 15 years, died Jan. 8 in Denver. During his administration, the state's network of hard-surfaced roads expanded from about 500 miles to nearly 6,000 miles, some of them being cut through high mountainous regions.

A native of Illinois and a graduate in civil engineering from the University of Illinois in 1891, Mr. Vail had a wide background of engineering experience in the West. Besides being associated with railroads in Wyoming, Texas, Utah and Mexico, he served as waterworks construction engineer in Butte, Mont., and later built the Ely, Nev., waterworks. Moving to Colorado in 1909, Mr. Vail supervised construction of the Colorado River irrigation division dam above Palisade and held posts of railway and hydraulic engineer for the Colorado public utilities commission and manager of improvements and parks for Denver before being appointed state highway engineer in 1930.

The Mount Evans Road, known as the "highest highway in the world", was one of the many projects built under Mr. Vail's direction.

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McComb and Haynes get new WPB assignments

Arthur J. McComb, vice-president of the Otis Elevator Co. and formerly in charge of field operations for that firm, has been named deputy vice-chairman for operations of the War Production Board, according to Harold Boeschenstein, WPB operations vice-chairman. Mr. McComb joined WPB in June 1944 as director of the office of industry advisory committee and last October was named director of WPB's construction bureau. This position he is now leaving to act as deputy vice-chairman for operations.

John L. Haynes, named to the position Mr. McComb is leaving. After graduation from George Washington University with degrees in civil engineering and law he was employed by the Charles H. Tompkins Co., contractors, Washington, D. C. Mr. Haynes then became associated with the U. S. Engineers Office, later with the N. P. Severn Co., Chicago. Mr. Haynes joined the WPB in December 1941 as chief of the lumber and building materials branch, and has been director of the building materials division since April 1942.

MEETINGS

National

ASSOCIATED EQUIPMENT DISTRIBUTORS, 26th annual meeting, Edgewater Beach Hotel, Chicago, Ill., Jan. 22-24.

THE ENGINEERING INSTITUTE OF CANADA, 59th annual general and professional meeting, Winnipeg, Man., Feb. 7-9.

Regional and Local

NEW YORK STATE COUNTY HIGHWAY SUPERINTENDENTS ASSOCIATION, annual meeting, Albany, N. Y., Jan. 24-26.

NORTH CAROLINA SOCIETY OF ENGINEERS, winter meeting, Hotel Sir Walter, Raleigh, N. C., Jan. 26-27.

CONSTRUCTORS ASSOCIATION OF WESTERN PENNSYLVANIA, annual meeting, William Penn Hotel, Pittsburgh, Pa., Jan. 31.

WISCONSIN COUNTY HIGHWAY COMMISSIONERS' ASSOCIATION, annual winter highway conference, Schroeder Hotel, Milwaukee, Wis., Jan. 30-Feb. 1.

COLORADO SOCIETY OF ENGINEERS, 29th annual convention, Shirley-Savoy Hotel, Denver, Colo., Feb. 1-3.

TEXAS WATER WORKS AND SEWERAGE SHORT SCHOOL, 27th annual meeting, College Station, Tex., Feb. 5-7.

IOWA ENGINEERING SOCIETY, 56th annual meeting, Hotel Ft. Des Moines, Des Moines, Iowa, Feb. 6-7.

NEW JERSEY SECTION, AMERICAN WATER WORKS ASSOCIATION, winter meeting, Winfield Scott Hotel, Elizabeth, N. J., Feb. 8.

WESTERN CONSTRUCTORS, INC. AND WISCONSIN CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC., joint convention, Oshkosh, Wis., Feb. 13-14.

ILLINOIS HIGHWAY ENGINEERS AND COUNTY HIGHWAY SUPERINTENDENTS, annual conference, at University of Illinois, Urbana, Feb. 14-16.

OHIO SOCIETY OF PROFESSIONAL ENGINEERS, annual convention, Deshler-Wallick Hotel, Columbus, Ohio, Feb. 15-16.

SOUTHEASTERN ASSOCIATION OF STATE HIGHWAY OFFICIALS, annual convention, Thomas Jefferson Hotel, Birmingham, Ala., Feb. 21-22.

ARKANSAS ENGINEERS CLUB, annual convention, Hotel Marion, Little Rock, Ark., Feb. 23-24.

Ohio groundwater regulation is proposed

The Ohio Water and Supply Board's advisory committee, including engineers and geologists, under the chairmanship of Wilber Stout, state geologist, in a recent report urges drastic regulations to halt pollution of the scanty Ohio groundwater supply. The committee was set up in 1941 by the legislature to find a remedy for the state's diminishing water supply.

The report states that further contamination of groundwater by careless oil and gas drilling practices and the use of old wells to dispose of refuse and sewage would force Ohio industries and communities to abondon groundwater supplies and depend wholly on surface water sources, often far distant from their location.

"The law should provide that the driller must have a permit and a properly constituted board should have the power to approve or reject such a permit with suitable penalties for violations," the report states. It also urges that funds and authority be provided to establish conservancy districts, centered around natural valleys such as the Miami north of Middletown and Hamilton, the Scioto north of Chillicothe and the Middle Branch above Canton. Such districts would not only provide for surface water storage but would serve certain flood control purposes and even provide recreational sites, it was suggested.

Members of the board, in addition to Stout, are: James E. Bauman, former acting state director of health; John T. Brown, director of agriculture; Frank L. Raschig, director of public works; and Paul Selby, director of commerce. On the advisory committee are: Kenneth Lloyd, Youngstown, representing the public; Evan F. Stearns, Cincinnati, commerce and industry; Perry L. Green, Columbus, agriculture; Thomas J. Donnaly, Columbus, labor; and George N. Schoonmaker, city manager of Toledo, municipalities.

In referring to the 2,500-ac. airfield built by the Northwest Division, U. S. Engineers near Edmonton, Alta., (*ENR* Jan. 4, vol. p. 2) we were in error in saying that it is the largest in area in North America. The Camp Springs Airport in Prince George's County, Md., is larger. It covers 4,500 acres and has four runways each 7,500 ft. in length.

JOBS OF THE WEEK

PREFABRICATED WOODEN BULKHEADS, Corvallis, Ore.

Beaver Cabinet Works, Corvallis, Ore., has been awarded a contract by U. S. Engineers, Portland, Ore., for 35,000 prefabricated wooden bulkheads for Quonset huts. The estimated cost is $3,000,000.

REFINERY, Wilmington, Calif.

McNeil Construction Co., Los Angeles, Calif., has been awarded a contract for administration building, cafeteria, personnel building, storage, paving and underground utilities for Union Oil Co., Los Angeles, Calif. The estimated cost is $2,000,000. Claude Beelman, Los Angeles is the architect.

HOSPITAL BUILDINGS, Dearborn, Mich.

Veterans Administration, Washington, D. C., received the lowest bid for additional buildings, utilities at Veterans Hospital, from F. H. McGraw Co., Hartford, Conn., at $2,998,447.

HOUSING, Washington, D. C.

National Capitol Housing Authority, Washington, D. C., received the lowest bid for 440 family dwelling units from Harris Construction Corp., Brooklyn, N. Y., at $2,359,400.

PIER, Terminal Island, Calif.

United Construction Co., Los Angeles, has been awarded a contract for Pier 6, at Naval Dry Docks, by the Bureau of Yards & Docks, Navy Department, Washington, D. C., at $2,556,408.

SEWERS, Corpus Christi, Tex.

Brown & Root, Houston, Tex., were the lowest bidders for constructing a sewer and drainage project, including bay front protection, 2 pump houses, etc. at $1,138,348. Mayor A. C. McCaughan, opened bids. Meyers & Noyes, Corpus Christi, are the engineers.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 16.

Construction Communiques

ENGINEERING NEWS FROM THE BATTLEFRONTS

Repairing the Albert Canal—A ited States Army Engineer General rvice Regiment, working with Bel- n and Dutch engineers, is helping ar the Albert Canal to be used to ve barge loads of supplies from twerp to Liege, Belgium.

The Nazis did not retreat in Belgium d Holland until demolitions had sent re than 200 highway and railway idges crashing into the canal. The rmans damaged the intricate locks. Stretching more than a hundred miles m the port of Antwerp to the inland dustrial city of Liege, the Albert nal was a great commercial water- y in peacetime and is a vital supply ute in war. It ranges in depth from to 98 ft.

Engineers were assigned the task of ising and clearing damaged spans d building new ones with ample clear- nce for the barges. British engineers e clearing the section of the canal in eir sector.

Four of the six companies of the giment, each consisting of 150 men, ve been given rehabilitation and re- ilding jobs. A port reconstruction oup, expert in underwater welding, tting and salvage, was originally as- gned to supervise the entire project the American sector, but a shortage transportation facilities delayed de- ery of their heavy equipment, so the ngineers have gone ahead by them- lves.

"I guess about 60 percent of our ables and explosives are captured emy equipment," Lieut. Joseph J. mith, Chicago, Ill., said. He is in harge of a platoon of Engineers cutting teel girders on one of the wrecked pans blocking the canal. "We get steel irders from a steel mill in Luxembourg, nd piling and flooring from an Army orestry battalion right here in Bel- ium," Lieut. Harry Bowles, Logans- ort, Ind., said. Designs for the new pans are drawn at Headquarters by Master Sergeant Lief Gustafson, of Woodridge, N. J., a graduate of the Gothenburg, Sweden, Institute of Tech- nology, and, in civilian life, a designer or Burns and Rowe, consulting engi- eers, New York City.

Honor for Negro Engineers—"A ital link between two regions of France as re-established Dec. 18 when a train, he first since the Germans left last August, crossed over the Dickerson- Amos Bridge, the largest piece of con- struction built to date by the American Army in France."

So writes Philip W. Whitcomb, staff correspondent of the *Baltimore Sun* and he continues,

"L. E. Dickerson and Albert Amos were two Negro soldiers killed by enemy action. The bridge was dedicated by their comrades of the regiment that built it.

"The viaduct, arches and piers were rebuilt in 27 days. The proud soldiers and officers were in formation below the bridge to make the dedication and receive the congratulations of the Chief of Engineers of the United States Army in Europe."

• • •

Chief of Navy's Seabees travels far and fast

When Rear Adm. C. H. Cotter, CEC, USN, Director, Pacific Division, Bureau of Yards and Docks, passed through San Francisco recently, questioning brought out the fact that since taking his present position 22 months earlier, supervision of Seabee activity in the Pacific had required him to travel more than a quarter of a million miles. A summary of his travel record is as follows:

	Days	Per- cent
From 2/19/43 to 12/16/44 incl.:	667	100
In Pacific area	479	72
On mainland outside San Francisco	102	15
In San Francisco	86	13
Flight Hours 1,319.3		
Surface transport ..... 38,736 miles		
Air transport ..... 216,431 miles		
Total statute miles... 255,167		

This is the equivalent of about 11,600 miles per month.

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Distinguished Service Cross for Gen. Sverdrup

"This is the engineer soldier at his best," said General Douglas MacArthur last week as he bestowed upon Brig. Gen. Leif J. Sverdrup the Distinguished Service Cross for his work in rushing into operation the Lingayen airfield so quickly won in our invasion of Luzon.

General Sverdrup is chief engineer to General MacArthur's Expeditionary Forces. He went out to the South Pacific early in the war as a civilian consultant on airbase development for the War Department, expecting to stay only a matter of weeks. He was soon in uniform, and has now just spent his fourth Christmas in the South Pacific. In private life General Sverdrup is a partner in the consulting engineering firm of Sverdrup & Parcel, St. Louis, Mo.

Official U. S. Army photo

U. S. Engineers repair a bridge on the Albert Canal

Wreckage like this dots the length of the Albert Canal. It is the task of U. S. Army Engineers to clear the ruins, replace the damaged spans with new bridges to carry rail and highway traffic, and to clear away the waste.

News of the Engineering Schools

Hunter Rouse, associate director of the Iowa Institute of Hydraulic Research, University of Iowa, since 1942, has been named director. Rouse, who holds degrees from the Massachusetts Institute of Technology, and the Technische Hochschule, Karlsruhe, and who held the M.I.T. traveling fellowship in hydraulics in 1929-31 and the summer of 1932, studying laboratory technique in Germany and France, was assistant in hydraulics at M.I.T. for two years starting in 1931. From 1933 to 1936 he was instructor in civil engineering at Columbia University, and in 1936 to 1939 was associate hydraulic engineer, Soil Conservation Service, and assistant professor of fluid mechanics at the California Institute of Technology. He joined the engineering staff at the University of Iowa in 1939 as professor of fluid mechanics, acting as consulting engineer to the Iowa Institute of Hydraulic Research from 1939 to 1942. He was awarded the Norman Medal of the American Society of Civil Engineers in 1938. Rouse is author of "Fluid Mechanics for Hydraulic Engineers" and "Elementary Mechanics of Fluids," and of numerous scientific papers.

Anticipating postwar developments, the Department of Civil Engineering at New York University will offer three new graduate courses in the evening, beginning Feb. 1. Harold E. Wessman, chairman of the department, describes the courses as follows:

"The first course will be 'Cement and Concrete Technology.' This will be given by Charles E. Wuerpel, principal engineer of the Central Concrete Laboratory for the United States Army Engineers in Mount Vernon, N. Y. This course will involve both lectures and laboratory work dealing with modern developments in cements and concrete mixtures. Chemical composition and physical characteristics of standard, low heat, sulfate-resisting, and high early-strength cements will be considered. Other topics will be the effect of admixtures, characteristics of fine and coarse aggregates, factors affecting workability, air entrainment, and inspection of concrete.

"A second course entitled 'Ground Water Hydrology' will be given by Major R. M. Leggette, consulting engineer and hydrologist, beginning Tuesday evening, Jan. 30, at the Washington Square Center of the College of Engineering. Major Leggette has had extensive experience in a consulting capacity and with the United States Geological Survey in geologic and hydrologic problems associated with water supply. The course will include a comprehensive study of ground water.

"The third course is 'Airport Engineering.' given by Hamilton Gray, assistant professor of civil engineering at New York University. This course will involve a consideration of the effects of geography, topography, meteorology, soil conditions, plane requirements, and industry upon the location, layout, detail design, and operation of airports. Design of parking, loading, landing, and takeoff surfaces, and airfield drainage, lighting, and maintenance also will be considered.

"These courses are open to anyone who has a bachelor's degree in civil engineering or its equivalent."

Frederick E. Terman, who for the last two years has been serving as head of the government's radio laboratory at Cambridge, Mass., while on leave from Stanford University's faculty, on Dec. 24 was named head of the Stanford Engineering School.

Dr. Terman succeeds Samuel B. Morris, who resigned last September to succeed H. A. Van Norman as chief engineer and general manager of the Los Angeles Department of Water and Power. Dr. Terman was graduated from Stanford in 1920. He also holds a degree from the Massachusetts Institute of Technology.

Dean F. M. Dawson, head of the college of engineering at the State University of Iowa, recently joined other college heads in criticizing the accelerated wartime teaching program. "The pace is too fast, and the results are not as good as under the former plan," he said.

The State Board of Education has approved a new degree for the curriculum of the Iowa State college division of engineering. Architectural engineers who have completed their 4-year course and have received a bachelor of science degree may, by taking an additional year in architecture, obtain a bachelor of architecture degree.

Walter F. Snyder, chief of the bureau of sanitation of the Toledo, Ohio, health department, has been named executive director of the National Sanitation Foundation, with headquarters at the University of Michigan, Ann Arbor. He has been given a leave of absence to assume his new duties at once. The foundation is a non-profit organization supported by industry to make continuing research studies and to develop educational material in the field of sanitation.

The North Carolina Shipbuilding Co. at Wilmington, N. C., has given $25,000 to the North Carolina State College and the North Carolina Engineering Foundation, Inc., whose objectives include expanding engineering research facilities at the college, strengthening the instructional staff, and developing a plan to broaden the college's services to industry.

The gift was announced by Col. J. W. Harrelson, administrative dean of the college, who said that "we anticipate that near-future needs will require keener young men who must have some knowledge of the value of research technique in addition to formal engineering education."

The foundation has plans for helping the college erect a general engineering laboratory building at a cost of about $700,000.

Plans for the establishment of twenty-one tuition-free, technical, two-year institutes in New York State, ultimately to cost between $30,000,000 and $40,000,000, and to provide facilities on the college level for approximately 100,000 students, have been drawn up by the Board of Regents of the University of the State of New York, William J. Wallin, vice chancellor of the board and chairman of the Regents Committee on Postwar Planning in Education, disclosed recently. Eleven of the schools are planned for New York City. One or two additional institutes are under consideration. According to Dr. Wallin it is the intention of the Regents to house the institutes in suitable existing buildings, but after the war, when the state's extensive building project gets under way, an effort will be made to provide modern structures.

Dr. Arno T. Lenz, associate professor of civil engineering at the University of Wisconsin, is chairman of a joint committee that is directing a hydrological research project in the Wisconsin River valley. A similar project is proposed for the Saginaw River drainage area in Michigan.

OBITUARY

Hubert Bell Jones, 56, civil engineer ... the Columbus, Ohio, engineer's de... ment, died Jan. 5.

Lieut. Col. Hubert I. Egenes, 26, ... y City, Ia., of the Army Air Forces, ...engineering graduate of Iowa State ...lege, who had been reported missing, ... killed in action over France, it is ... announced.

William F. Wilcox, Sr., 75, former ...sulting and construction engineer for ...nicipal waterworks at Birmingham, ..., and other southern cities, died ... 5 in Atlanta, Ga.

Charles Henry Wells, 74, for 15 years ...nected with the city engineer's office ...Salt Lake City, Utah, died there Dec.

Clarence Alfred Lease, 38, of Lake ...kson, Tex., construction engineer for ... Dow Chemical Co., died at Houston ...c. 27.

William E. Weston, 58, former Mar... County, Ohio, engineer and resident ...gineer for the Ohio State Highway ...partment, died at Marion, Jan. 8.

E. E. Gagnon, 54, consulting engi... for the U. S. government, died at ...rmingham, Ala., Jan. 8.

Harley Walter Shank, 46, for 17 years ...perintendent of the Chicago Bridge ...d Iron Works at Houston, Tex., died ...ere Jan. 5.

John M. Waddill, 35, formerly civil ...gineer with the Georgia State High... ...y Department, died Jan. 8 at Way... ...oss, Ga.

William Moran, long connected with ...e Robert Hunt Co., engineering firm, ...rmingham, Ala., died in Birmingham ...n. 9.

James Madison Reid, 86, civil engi... ...eer of Pilot Point, Tex., died there ...n. 8. During his career, Mr. Reid ...rved as chief construction engineer ...n the Trans-Atlantic Railroad in Africa ...nd was construction engineer for rail... ...ads in Mexico for 35 years.

Mike Hasse, 64, of Kansas City, Mo., ...r more than 40 years a leading Kansas ...nd Missouri construction engineer en... ...aged in highway and railway bridge construction in the middle west, died Jan. 10. He was active in the work of the Associated General Contractors of Kansas and Missouri. Mr. Hasse was born in Strassburg, Ill. After his formal education he moved to St. Joseph, Mo., where he was engaged in road construction work until 1934, when he moved to Kansas City.

Harry Robert Taube, 65, a prominent engineer in pre-revolutionary Russia, died in New York, Jan. 10. He came to the United States in 1923 and later became a citizen. He was connected with engineering concerns in the United States and Cuba, including the Pressed Steel Car Co., Babcock & Wilcox Co. and Combustion Engineering Co., Inc. For the past two years he had been an associate engineer in the Engineer Research Office, Office of the Chief of Engineers, United States Army.

Emerson Dolliver, associate hydraulic engineer, department of dams, California Division of Water Resources, died in December in Sacramento, Calif. A 1923 graduate of the University of California's School of Civil Engineering. Mr. Dolliver joined the division in 1938. Previously he was engaged in water supply and sanitary engineering work in the Pacific northwest.

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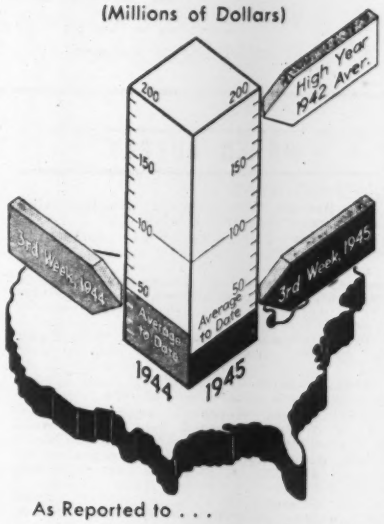
License granted for contested Mass. pipeline

The Massachusetts Public Works Department granted a license Jan. 2 to the Colonial Beacon Oil Co. for a fuel oil pipeline under the Merrimack River between the towns of Andover and Dracut. After two hearings at which Lawrence officials opposed an oil pipeline across the Merrimack above that city's water filtration plant, a petition in opposition to the project had been filed with the Public Works Commission.

The pipeline was opposed by Methuen and Lawrence officials (*ENR* Nov. 2, 1944, vol. p. 108) on the contention that their water supplies would be menaced if a leakage occurred. Attorney Frederick D. Jennings, representing the oil company at the hearings, presented a statement by Metcalf & Eddy, Boston consulting engineers, stating that in their opinion the four-inch pipeline would constitute no hazard to the Lawrence water supply. The Massachusetts Department of Health declared it would favor the project if installation of valves on the pipeline above the maximum flood level were made so that the flow of oil could be shut off in case of emergencies.

CONSTRUCTION ACTIVITY THIS WEEK

(Millions of Dollars)



As Reported to . . .
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only
(Thousands of Dollars)

	Week of Jan. 18 1945	Cumulative 1945 (3 wk.)	Cumulative 1944 (3 wk.)
Federal	$16,126	$35,650	$102,221
State & Municipal	4,401	13,966	4,186
Total Public	$20,527	$49,616	$106,407
Total Private	7,175	29,786	16,870
U. S. Total	**$27,702**	**$79,402**	**$123,277**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Type of Work	Dollar Volume (Thousands) This Week	Cumulative 1945 (3 wk.)	Cumulative 1944 (3 wk.)
Waterworks	$1,847	$3,178	$1,062
Sewerage	356	1,913	1,640
Bridges	248	3,378	1,210
Highways	1,540	7,804	3,457
Earthwork, Waterways	62	909	1,364
Buildings, Public	8,887	20,177	78,607
Industrial	5,375	23,145	3,479
Commercial	1,210	2,409	12,037
Unclassified	8,177	16,489	20,421

NOTE: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1945 (3 wk.)	Cumulative 1944 (3 wk.)
NON-FEDERAL	$23,663	$52,964
Corporate Securities	1,270	46,300
State and Municipal	22,393	4,764
RFC Loans	....	1,900
FEDERAL	$77,137	$90,832
Total Capital	**$100,800**	**$143,796**

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	Jan. '45	302.50	145.41
Building Cost	Jan. '45	236.51	127.85
Volume	Dec. '44	66	29

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.
ELSIE EAVES, Manager *SCOTT McLEOD, Statistics* *J. A. MAHONEY, Reports*
(Daily service also available—Write for details)

WATER SUPPLY

PROPOSED WORK

Ia., Orange City—City, A. Hasselo, clk., addnl. water supply. $15,000.

O., Lima—City, City Hall, pipeline to quarry, $100,000.

Tex., Dallas—City, E. Goforth, secy., Dallas, rejected bids Dec. 20, 36 and 30 in. c.i. water pipeline along Inwood Rd., from Hines Blvd. to Denton Dr. CD 12/28—ENR 1/4, under LB.

Tex., Dallas—City, pump. sta. unit, Cadiz St. $35,000. Engineer c/o H. Hunter, City Hall.

Tex., Houston—City, revising plans 200,000 gal. rein.-con. reservoir. $25,000.

Wis., Mount Horeb—Village, C. Gesme, clk., City Hall, rejected bids Jan. 8, well. Will readvertise. CD 11/28—ENR 11/30.

Ont., Ridgeway—Municipality, plans water-mains. $20,000. J. R. Scott, Port Colborne, engr.

Ont., Swansea—Municipality, 12 in. water-main exten., constructing hydrants, valves, appliances, etc. $30,000.

Que., Gatineau—Village, J. L. Smith, secy., preparing plans imprv. WW sys., incl. 5 mi. water intake from High Falls on Little Blanche River, north of East Templeton. $250,000. Farley & Cassels, 18 Rideau St., Ottawa, engr.

Que., Hull—City, R. Brunet, mayor, installing watermains, Aylmer Rd., Front and other streets. $100,000. T. Lanctot, c/o City, engr.

Que., Sweetsburg — Municipality, water supply extens. at Crystal Lake. $40,000.

BIDS ASKED

Bids Asked Early in Spring

Wash., Bellingham—Marietta Water Dist., Bellingham, water distr. sys. $140,000. Parker & Hill, Smith Tower, 2 and Yesler Sts., Seattle, Zone 4, engrs.

LOW BIDDERS

Calif., Lamont—Lamont Public Utility Dist., 248 Weedpatch Hy., Jan. 4, furnishing, installing pipe for water sys., from Merritt Welding Contractors, 9651 S. Alameda Blvd., Los Angeles, **$28,617.**

Mich., Wayne — Nankin Twp., Wayne, water sys. extens., c.i. pipe, accessories, from G. W. Harrison, 1580 Garfield St., Lincoln Park, **$85,713.**

Tex., Houston—City, M. H. Westerman, secy., City Hall, Jan. 10, 24 in. watermain in Hazard St. from South Blvd. to Westheimer St. and in Westheimer St. from Hazard to Driscoll Sts., from R. P. Farnsworth & Co., Bankers Mtge. Bldg., **$95,570;** Driscoll St. from W. Gray to W. Dallas Sts., from Russ Mitchell, Inc., 2302 Jefferson St., **$59,819.**

†Tex., Waco—G. H. Rohan, water supt., Jan. 5, Contr. 2, water imprvs., Tex. 41-706 N, from Williams & Whittle, Inc., 5422 Mockingbird Lane, Dallas, **$162,306. FWA.** CD 12/15—ENR 12/21.

CONTRACTS AWARDED

Minn., Dawson—City, C. E. Olson, clk., gravity-type aeration and iron-removal plant, to Crane Co. of Minn., 400 3 Ave. N., Minneapolis. **$55,567.** Bids 12/28.

Minn., Luverne—Village, E. Thron, supt. Utilities, installing elevated steel water tower and 300,000 gal. tank, to Pittsburgh-Des Moines Steel Co., 915 Tuttle St., Des Moines, Ia., **$29,600.** Bids 1/2. CD 12/20—ENR 12/28.

†O., Bucyrus—City, F. Pfeifer, service dir., City Hall, Contr. 1, clear well and piping, to Drainage Contractors, Inc., 14375 Schaeffer Ave., Detroit, Mich., **$27,495;** Contr. 2, c.i. lines to G. H. Leach, Bellfontaine, **$127,642,** both Ohio 33-298-N. **FWA.** Bids 12/18. CD 12/1—ENR 12/7.

O., Cleveland—City, E. J. Crown, dir. P. Utilities, City Hall, Fairmount pump. sta. addn., to H. F. Juergens, 15430 Edgewater Dr., Lakewood, Cleveland, **$320,833.** Bids 12/29. CD 10/31—ENR 11/2.

Tex., Houston—Harris County Water Control & Imprvt. Dist., Houston, water well, with 1,000 g.p.m.c., complete with pumps, motor, etc., furnishing, installing and trap, necessary piping, to Layne-Texas Co., 6981 Harrisburg Blvd., **$21,362.** Awarded 1/2. Hays & Donathan, 3940 S. Main St., engrs.

★**Tex., Wichita Falls**—City, Contr. 1, over 1,000,000 yd. dirt work, earthen dam, 2½ mi. gravel hy., drainage structures, to L. J. Miles Const. Co., Fort Worth Natl. Bank Bldg., Fort Worth, **$613,602;** Contr. 2, clearing, grubbing, fencing, to United Contg. Co., Wichita Falls, **$134,698.** Bids 12/13. CD 12/19—ENR 12/21, under LB.

Wis., Marinette—Marinette Water Works, Marinette, E. Bowman, supt., general contract rebuilding pump. station, to F. Colburn, 2110 Hall Ave., **$20,825.** Bids 1/4. CD 10/17—ENR 10/19.

Symbols and Abbreviations Include:

†	Federal Government
★	Project of $500,000 or over
ENR	Engineering News-Record
CD	Engineering New-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads): BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Mo., Gardenville (St. Louis Zone 23)—Lakewood Sewer Dist. of St. Louis Co., c/o Clerk, Circuit Court, Clayton, St. Louis, Zone 5, defeated $91,000 bonds, sanitary and storm water sewers. E. A. Fulton, 3 S. Meramec Ave., Clayton, St. Louis, Zone 5, engr. CD 12/29.

N. J., Clayton—Boro, P. Adams, clk., F. C. Myers, mayor, 146 E. High St., Glassboro, making plans sewerage sys. and disposal plant. Approx. $150,000-$200,000. Wm. A. Goff, Broad St. Suburban Station Bldg., engr.

O., Cincinnati—City, City Hall, making plans sewer in north Bend Rd. between Argus and Winton Rds. $25,000. H. H. Kranz, City Hall, city engr.

Pa., Honesdale — Borough, A. Emerson Howell, Foster Bldg., preliminary plans sewage disposal plant, intercepting sewer. $150,000. Albright & Friel, Inc., 1520 Locust St., Phila., engrs.

Man., Winnipeg — Municipality, J. Blumberg, alderman, sewers Elltice Ave. from Dowing to Strathcona Sts. and Redwood Ave. from CPR to Prince St. $28,365.

Ont., Cobourg—Municipality, trunk sewer and change in sewer outlet in harbour. $50,000. Health & Sanitation Com., Town Hall, engr.

Ont., Mimico—Municipality, repairing imprv. sewage disposal plant. $50,000.

Ont., New Toronto—Municipality, W. J. McDonald, reeve, plans trunk sewer. $120,000; garbage incinerator imprvs., $30,000.

Ont., Peterborough—Municipality, storm drains, sewerage in North Monaghan area. $60,000. R. H. Parsons, City Hall, engr.

Que., Sherbrooke—City, A. Deslauriers, clk., installing sewers, various streets. $113,475.

BIDS ASKED

Bids Asked January 22

N. Y., New York—Dpt. P. Wks., Municipal Bldg., Zone 7, reconstructing beam sedimentage in tank structures, Tallmans Island Sewage Treatment Works. Plans deposit $5.

Bids Asked January 25

†Tex., Bay City — City, S. E. Doughty, mayor, sewerage collection sys. extens., addns., 2 lift stations, disposal plant addns., alterations and repairs, necessary appurtenances, Contr. 3, Tex. 41-702-N. **FWA.** Plans deposit $10. S. A. Russell, Bay City, engr. CD 11/15—ENR 11/23, under Water Supply.

LOW BIDDERS

Conn., Rocky Hill—State, Comptroller's Office, State Office Bldg., Hartford, Jan. 12, sewage disposal plant, exten. disposal facilities, U. S. Veterans' Home, from New Britain Trucking Co., 1146 East St., New Britain, **$33,900.** D. Orr, 96 Grove St., New Haven, archt. Buck & Buck, 650 Main St., Hartford, engrs. CD 1/8.

Conn., Storrs—State, Comptroller's Office, State Office Bldg., Hartford, Jan. 12, sewage pump. station, University of Connecticut, from Campanella & Cardi Constr. Co., 30 Sprague St., Providence, R. I., **$44,750.** Buck & Buck, 650 Main St., Hartford, engrs. CD 1/8.

★**Tex., Corpus Christi**—City, A. C. McCaughan, mayor, City Hall, Jan. 11, sewer and drainage, incl. some bay front protection work, 2 large pump houses, etc., from Brown & Root, P.O. Box 3, Houston, **$1,133,348.** Meyers & Noyes, Nixon Bldg., engrs.

CONTRACTS AWARDED

Kan., Abilene—At office M. E. Calkins, city clk., sanitary outfall sewer, concrete pump. sta. with 2 pumps and controls, etc., to Chambers Constr. Co., Terminal Bldg., Lincoln, Neb., **$37,714.** Est. $45,000. Bids 12/28. CD 12/26—ENR 12/28.

N. C., Shelby — City, sewer outfall, to Blythe Bros. Co. Inc., 424 S. Brevard St., Charlotte, **$43,862.** Bids 1/2. D. Frazier, Shelby, engr.

N. C., Wilmington—City, furnishing materials and supervise labor for construction twin-furnace incinerator, to Nye Odorless Incinerator Co., Macon, Ga., **$62,500;** City will construct foundations, drive piling, build structure, incl. ramps and approaches, own forces, **$41,900.** Bids 12/13 rejected. CD 12/19—ENR 12/21, under LB.

†Pa., Phila.—E. G. Budd Mfg. Co., 25 St. and Hunting Park Ave., industrial waste disposal plant, Philmont plant, to Wark & Co., 1700 Sansom St., **$28,938.** Awarded 1/4. Defense Plant Corp. will finance.

Pa., Phila.—City, P. Wks. Dpt., J. H. Neeson, dir., City Hall, sewers and water supply, drainage and appurtenance work, to Marino Masse, 3613 N. 8 St., **$84,220.** Awarded 1/2.

BRIDGES

PROPOSED WORK

Calif., Ventura—Ventura Co., Court House, bridge over Santa Paula Creek, Steckel Park, $25,000. D. R. Warren, 500 S. Figueroa St., engr.

Ont., Wallaceburg—Pere Marquette Ry. Co., H. A. Cassil, sh. engr., General Motors Bldg., Detroit, Mich., U. S. A., reconstructing bridge. **$35,000.**

IDGES, etc. (Proposed Work, Cont'd.)

Ont., Wellesley—Wellesley Twp., plans idge at Kingswood, near here. $26,000.

Que., Sherbrooke—City, A. Deslauriers, viaduct under Quebec Railway tracks. ,000.

DS ASKED

Bids Asked January 23

Kansas—State Hy. Dpt., Winfield, sub- ucture 75 ft.-5 at 90 ft.-75 ft. continuous el beam bridge, Proj. 18W.E.R. 5, Cow- Co. R. C. Keeling, Topeka, engr.

Bids Asked January 24

Kansas—State Hy. Dpt., Osborne, 0.019 bridge repairs to channel and berms, j. 3334, Norton Co. R. C. Keeling, peka, engr.

NTRACTS AWARDED

Alabama—State Hy. Dpt., G. R. Swift, Montgomery, bridges on 0.062 mi. Tus- oosa Co., to H. N. Donahue, 2200 6 Ave. Birmingham, $72,816; bridges on 0.064 Tuscaloosa Co., to Montgomery Const. Montgomery, $81,307. Bids 1/5. CD —ENR 12/28, under Roads.

N. H., Rochester—State Hy. Dpt., Concord, ft. stone faced, rein.-con. arch bridge, proaches, to O. W. Miller Co., Inc., Lud- , Mass., $74,070. Bids 1/11. CD 12/27— R 1/4.

STREETS AND ROADS

DS ASKED

Bids Asked January 23

Kansas—State Hy. Dpt., Winfield, grad- 0.283 mi. Project 18 W.E.R. 5, Cowley R. C. Keeling, Topeka, engr.

Bids Asked January 24

Kansas—State Hy. Dpt., Osborne, lime- ne gravel surfacing 1.53 mi. P. 3790, sell Co.; 20.424 mi. P. 3791, Osborne Co.; nt type surfacing 14 mi. Proj. K 3105, an Co.; 11.912 mi. Proj. K 3106, resur- ing material 16.964 mi. P. 3792 AB, both e Co. R. C. Keeling, Topeka, engr.

W BIDDERS

Calif., Los Angeles—City, Bd. P. Wks., y Hall, Jan. 4, roadway and waterway, bora Dr. and R. W 2, Sinaloa Rd. to Lin- n Blvd., from Tomei Constr. Co., 4737 on St., Van Nuys, $40,721. L. Aldrich, y Hall, engr.

Louisiana—State Dpt. Hys., Baton Rouge, n. 10, imprv. 12 mi. Sabine Parish from M. Lilly, Fidelity Bank Bldg., Baton uge, $65,762***10.1 mi. Rapides Parish, m Horton-Pollard, Bossier City, $27,445 5.1 mi. Vernon Parish, from O. L. Aber- hy, Sulpher, $29,421. CD 12/19—ENR 21.

Tex., Houston—City, c/o M. H. Wester- n, secy., Jan. 3, rein.-con. paving Lorraine from Carr to Cochran Sts., from Gulf ulithic Co., 2820 Polk St., $94,325. CD 22.

NTRACTS AWARDED

Alabama—State Hy. Dpt., G. R. Swift, dir., Montgomery, imprv. 10.592 mi. Tus- oosa Co., to Ziegler Constr. Co., American tl. Bank Bldg., Nashville, Tenn., $707,552 10.501 mi. Tuscaloosa Co., to Weymouth st. Co., 2174 Person Ave., Memphis, n., $731,959***1.752 mi. Tuscaloosa Co., Wright Contg. Co., Columbus, $330,609. nd total $1,770,020. Bids 1/5. CD 12/20 NR 12/28.

Man., Winnipeg—Municipality, J. Blum- r, alderman, 40 ft. wide pavements on lice Ave. to Strathcona St. $150,000, and ft. wide pavements, Sargeant Ave. to rathcona St. $100,000, day labor.

EARTHWORK, WATERWAYS

ROPOSED WORK

†Kan., Arkansas City—U. S. Eng., 416 right Bldg., Tulsa 2, Okla., cancelled bids have been opened Jan. 7, emergency levee pairs on bank Arkansas River, Serial No. 066-45-28. Over $150,000. CD 12/28.

†Kan., Wichita—U. S. Eng., 416 Wright dg., Tulsa 2, Okla., repair work along ttle River. $91,000.

†Tex., Corsicana—U. S. Eng., Cit. Bank dg., levee work, Navarro C. Levee Dist. 1, rial 41-242-45-91. Over $25,000.

Quebec — Provincial Govt., Quebec City, prox. 2 mi. land drainage ditch, 40 ft. de, 12 ft. deep, St. Alexandre-St. Antonin, amouraska Co. $300,000.

DS ASKED

Bids Asked January 23

Iowa—State Hy. Comn., Ames, mainte- nce channel change, involving 17,500 cu. earth excav. on Iowa 149, at South unk River, Project M-5278, Keokuk Co. nder $25,000. F. R. White, Ames, ch. engr.

Bids Asked January 27

†S. C., Charleston—U. S. Eng., 33 Custom-house, maintenance dredging from Winyah Bay to here, Proj. 38-081-45-8.

Bids Asked February 3

†Ore., Bend—Bureau Reclamation, Bend, earthwork, structures, 112,000 cu. yd. common excav., 1,000 cu. yd. rock and 1,320 cu. yd. concrete, Deschutes Project, 29 mi. north of here, Spec. 1092; adv. ENR 1/18.

Bids Asked February 6

La., Point A-la-Hache—Plaquemine Parish Police Jury, thru F. K. Cummins, pres., Court House Bldg., 30,350 lin. ft. canal sweeping and widening, and levee repairs, on Buras to Fort Jackson (Back Protection Levee), on West side of Mississippi River, Plaquemine Parish. Plans deposit $5. Jno. C. De-Armas, Jr., Point-A-la-Hache, and 8004 Hickory St., New Orleans, engr.

Bids Asked March 1

New South Wales, Sydney—John Messner, secy. Water Conservation & Irrigation Comn., Farrer Place, Box 2708 G.P.O., Sydney, New South Wales, supply and delivery, free on wharf or free on rails, Sydney of 1 to 6 shallow boring plants.; adv. ENR 1/18.

CONTRACTS AWARDED

O., Napoleon — Bd. Comrs. Henry Co., Napoleon, imprv. County Ditch 1595, Pleasant, Marion and Monroe Twps., and Tri-County Ditch 1597, in Pleasant, Palmer and Highland Twps., to Miller Bros., Archbold, $24,657 each. Bids 12/16 and 12/20 respectively. C. W. Ingle, Napoleon, co. engr.

N. S., Halifax—Dpt. National Defense (Sea), Ottawa, Ont., repairing north jetty at H.M.C. Magazine, to H. M. McManus, 290 Tower Rd., $25,000.

LATIN AMERICA

Argentina, Buenos Aires—Republic of Argentina, Buenos Aires, plans airport on 6,000 hectares of land in department of Esteban Echeverria. 30,000,000 pesos.

Argentina, Cordoba—Government of Argentina, Buenos Aires, plans gas works and distr. sys. exten., new equip. $150,000. Dpt. P. Wks., Buenos Aires, engr.

Argentina, San Nicolas — Republic of Argentina, Buenos Aires, plans grain elevator addns. in province of Cordoba. $100,000. Dpt. P. Wks., Buenos Aires, engr.

Argentina, Sante Fe—Republic of Argentine, Buenos Aires, plans grain elevator exten. $150,000. Dpt. P. Wks., Buenos Aires, engr.

Bolivia, Pocona—Republic of Bolivia, La Paz, plans hospital. $250,000.

Bolivia, Poji—Republic of Bolivia, La Paz, plans hospital. $300,000.

Bolivia, Totora—Republic of Bolivia, La Paz, plans hospital, $300,000; Republic of Bolivia, La Paz, in association with Municipality, plans stadium, $150,000.

Chile, La Granga—Cia Internacional de Radio S. A., La Granga, plans radio-telegraph transmitter station. $95,000.

Chile, Santiago—Republic of Chile, Santiago, plans copper plate production plant. $500,000. Commission of Inter American Development, Santiago, engr.

Chile, Santiago—Soc Chilena Radiodifusora S. A., Santiago, plans 10,000 watt radio station. $150,000.

Chile, Santiago — Soc Radiofusora La Mercantil, S. A., Santiago, plans radio station to have two 5,000 watt each transmitters. $125,000.

Colombia, Bogota—Pan American Airways, Lima, plans enlarging airport to permit landing and servicing of supercraft. $200,000.

Colombia, Bogota—Republic of Colombia, Bogota, takes bids February 15, constructing telephone lines.

Mexico—Dpt. Public Works & Communications, c/o Edw. Suarez, Mexico City, plans constructing hard paved border hy. between Matamoros and Tijuana. $1,250,000. Engineer, c/o Dpt. P. Works Eng.

Mexico, Acajulco—Mexican Fed. Govt., c/o Dpt. Communications, Mexico City, plans airport work. $250,000.

Mexico, Altamirano—Republic of Mexico, Mexico City, plans hydro-electric development. $300,000. Federal Electricity Comn., Mexico City, engr.

Mexico, Apatzingan—Republic of Mexico, Mexico City, plans hydro-electric development. $200,000. Federal Electricity Comn., Mexico City, engr.

Mexico, Coyuca de Catalan—Republic of Mexico, Mexico City, plans hydro-electric development. $200,000. Federal Electricity Comn., Mexico City, engr.

Mexico, Guadalajara—Mexican Fed. Govt., c/o Air Force & Military Aviation Dept., Mexico City, plans constructing airdrome, and over 20 mi. hard-paved runways, etc. $12,000,000.

Mexico, Guaymas—Productos Congelados S. A., Guaymas, plans cold storage and quick freezing plant. $75,000.

Mexico, La Laguna—Republic of Mexico, Mexico City, plans 37,000 hp. thermo-electric plant. Over $500,000. Federal Electricity Comn., Mexico City, engr.

Mexico, Mexico City—Ericsson Telephone Co. of Mexico, Mexico City, plans exten. telephone sys. 5,000,000 pesos.

Mexico, Monterrey—Mexican Federal Govt., c/o Dpt. Communications, Mexico City, plans airport work. $200,000.

Mexico, Poncitlan — Syndicate Rayon, Poncitlan, plans rayon yarn mfg. plant. $100,000.

Mexico, Suchiate—Republic of Mexico, Mexico City, plans International Bridge over Suchiate River. $200,000.

Mexico, Tampico—Compania Deshidratora de Tampico, S. A., Tampico, plans fruit, vegetable, egg and milk dehydration plant. $50,000.

Mexico, Tehauntepec—Republic of Mexico, Mexico City, plans bridge over Tehauntepec River. $150,000.

Mexico, Totoltan—Republic of Mexico, Mexico City, plans hydro-electric development. Over $200,000. Federal Electricity Comn., Mexico City, engr.

Mexico, Vera Cruz—Republic of Mexico, Mexico City, plans 20,000 hp. development. $700,000. Federal Electricity Comn., Mexico City, engr.

Mexico, Nautla—Mexican Fed. Govt., c/o Dpt. Communications, Mexico City, plans airport work. $275,000.

Mexico, Puebla—Mexican Fed. Govt., c/o Dpt. Communications, Mexico City, plans airport construction. $450,000.

Mexico, Tampico—Mexican Fed. Govt., c/o Dpt. Communications, Mexico City, plans airport work. $450,000.

Panama, Panama City — Municipality, will widen and beautify 3 mi. Via Espana, sidewalks and grass blvd. along both sides, by own forces. $550,000 voted.

Peru, Arequipa — Compania Peruana de Cemento Portland, Lima, plans cement plant. $350,000.

Peru, Chimbote—Corporacion Peruana Del Santa, Edificio Beytia, Lima, plans irrigation project. $300,000.

Peru, Chimbote—Corporacion Peruana Del Santa, Edificio Beytia, Lima, plans cement plant. $500,000.

Peru, Cuzco — Republic of Peru, Lima, plans 620 mi. railway line, passing down valley of Urubamba and continue east of Ucayali River. $15,000,000.

Peru, Leticia—Pan American Airways, Lima, plans airport. $150,000.

Peru, Trujillo—Compania Peruana de Cemento Portland, Lima, plans cement plant. Over $350,000.

Venezuela, Cumana—Syndicate, c/o National Supply Comn., Caracas, plans can mfg. and fish packing plant. 200,000 bolivares.

Venezuela, Maracaibo — Republic of Venezuela, Caracas, plans 2 refrigeration plants. $150,000.

Venezuela, Maracay—Republic of Venezuela, Caracas, plans reclaiming 2,000 hectare Government-owned Hacienda Tocoron near here, to be sub-divided into lots of 50 to 100 hectares to be distributed to selected farmers. $1,000,000. Dpt. Agriculture, Caracas, engr.

Venezuela, Puerta Cabello—Government of Venezuela, Caracas, plans asbestos-cement plant. $200,000.

Venezuela, San Feliz — Iron Mines of Venezuela, Caracas, plans iron ores development in El Pao, 30 mi. south of here, on Orinoco, near mouth of River Garani. $500,000.

PUBLIC BUILDINGS

PROPOSED WORK

†Ala., Montgomery — Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital addns. $230,000. CD 2/16—ENR 2/24.

†Calif., Barstow—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 65 unit portable shelters, Calif. 4889.

†Calif., Los Angeles—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., 12 unit housing. $60,000.

†Calif., Needles—Pub. Housing Auth., NHA, 785 Market St., San Francisco, plans by J. D. Harnish, 212 E. B St., Ontario, 50 unit family dwellings, Calif. 4974. CD 12/27—ENR 1/4.

†Calif., San Luis Obispo—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 30 unit family dwellings, Calif. 4977.

†Conn., Newington—Veterans Admin., Vermont Ave., between H and I Sts. N.W., Wash. 25, D. C., hospital. $87,000.

PUBLIC BLDGS. (Proposed Work, Cont'd.)

★**D. C., Wash.**—Bd. Educ., District Bldg., bids soon school, Anacostia Ave., DC 49139. $500,000. FWA. CD 11/9—ENR 11/16.

†**D. C., Wash.**—Catholic University of America, 620 Michigan Ave. N.E., plans by Murphy & Locraft, 1413 H St. N.W., nurses quarters, DC 49152. $240,000. FWA. CD 10/3—ENR 10/5.

†**Ga., Atlanta**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital addns. $140,000. CD 2/16—ENR 2/24.

†**Idaho, Boise**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital. $120,000.

†**Ind., East Chicago**—E. I. duPont de Nemours & Co., du Pont Bldg., Wilmington, Del., sulphuric acid plant addns. $400,000 or more. Defense Plant Corp. will finance.

★†**Ind., Evansville**—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago 6, Ill., 200 unit housing, $1,400,000.

†**Ind., Hammond**—Stauffer Chemical Co., 5801 Indianapolis St., sulphuric acid plant, $200,000 or more. Defense Plant Corp. will finance.

†**Ind., South Bend**—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago 6, Ill., 170 unit family stop-gap housing, Ind. 12199; 200 unit single person housing, Ind. 12200.

†**Ia., Des Moines**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital. $55,000.

†**Ia., Knoxville**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., bldg., $45,000; kitchen area construction, $15,000.

†**Kan., Eudora**—Pub. Housing Auth., NHA, 1205 Electric Bldg., 7 and Taylor Sts., Fort Worth 2, Tex., 300 unit family dwellings, Kan. 14143.

†**Me., Augusta**—Dpt. Institutional Services, State House, Augusta, plans by Bunker & Savage, 256 Water St., hospital wing addn. $350,000.

Mass., Gloucester — Dpt. P. Wks., 100 Nashua St., Boston, freezing plant. $300,000. Fay, Spofford & Thorndike, 11 Beacon St., Boston, engrs.

Mass., Hyannis—Commonwealth of Massachusetts, office of Supt., Maritime Academy, plans by W. M. Gaffney, 43 Potter St., brick, engineering bldg., concrete fdn. Over $150,000.

★**Mich., Benton Harbor** — Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland 15, O., 60 unit single person housing, Mich. 20278.

†**Mich., Dearborn**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital. $320,000.

Mich., Holland—Holland Hospital, A. Van Zanten, chn., Holland, plans by L. J. Sarvis, Battle Creek, brick, steel, concrete hospital addn. $175,000.

†**Minn., St. Cloud**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., kitchen area construction. $50,000.

†**Neb., Lincoln**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., addnl bldg. $55,000.

†**Nev., Reno**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital. $58,000.

★†**N. J., Newark**—Pub. Housing Auth., NHA, 270 Bway., New York 7, N. Y., revised plans by W. E. Lehman, 972 Broad St., housing, NJ 2-9. $1,500,000. CD 11/8—ENR 11/16.

N. Y., Brooklyn—Port of New York Authority, 111 8 Ave., New York, Zone 11, rejected bids Dec. 14, storage warehouse and garage, Columbia St. $25,000. CD 11/17—ENR 11/23.

†**O., Chillicothe**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., warehouse. $50,000.

†**O., Fostoria**—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, plans by Maier, Outcalt, Dickerson & Assoc., 13124 Shaker Square, Cleveland, 30 unit trailer housing, Ohio 33312.

†**Ore., Portland**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital addns. $135,000. CD 2/29—ENR 3/2.

Pa., Chester—Chester City School Dist., c/o School Directors, approved bonds, erecting, enlarging, equip. school bldg., addns. to present bldg. $225,000.

★†**Pa., Lebanon**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., addnl. hospital facilities. $750,000.

†**Tex., Amarillo**—Pub. Housing Auth., NHA, 1205 Electric Bldg., 7 and Taylor Sts., Fort Worth, Zone 2, 10 unit family stop-gap housing, Tex. 41637.

†**Tex., Longview**—U. S. Eng., 231 W. Main St., Denison, sprinkler sys. for Harmon General Hospital, Serial No. 41-242-45-86. $50,000.

★†**Tex., McAllen**—**McAllen Housing Auth., McAllen, 400 unit housing for NHA. $600,000.**

★†**Tex., Pampa**—Defense Plant Corp., 311 Vermont Ave. N.W., Wash. 25, D. C., carbon black plant, in vicinity of here. $1,500,000.

Wash., Oak Harbor—City, City Hall, plans by Naramore & Brady, Dexter Horton Bldg., Seattle, Zone 4, hospital. $150,000. Seeking FWA funds.

†**Wash., Renton**—Pub. Housing Auth., NHA, Skinner Bldg., 5 and Union Sts., Seattle, Zone 1, plans by G. W. Stoddard, Orpheum Bldg., Seattle, Zone 1, moving 432 standard dormitory units from Vancouver and re-assembling them here. $150,000.

†**Wash., Seattle**—Pub. Housing Auth., NHA, Skinner Bldg., 5 and Union Sts., Zone 1, plans by Jones, Bouillon, Thiry & Sylliaasen, Hoge Bldg., 2 and Cherry Sts., Zone 4, dismantling dormitory unit at Vancouver, transporting and re-assembling here with utilities, etc. $65,000.

†**Wash., Seattle**—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Zone 1, indefinitely postponed bids to have been opened Jan. 5, converting 125 barracks into dormitory units, Proj. 45272. Jones, Thiry, Bouillon & Sylliaasen, Hoge Bldg., 2 and Cherry Sts., Zone 4, archts. CD 12/27—ENR 12/14.

†**Wash., Seattle**—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Seattle, Zone 1, plans 432 unit single person housing, Wash. 45303.

W. Va., Charleston—Health Dpt., Capital Bldg., plans health bldg. $400,000.

†**W. Va., Huntington**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital addns. $95,000.

★†**Wis., Wood**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 24, D. C., hospital. $330,000.

†**Wyo., Cheyenne**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., hospital. $40,000.

B. C., Nanaimo—Bd. School Trustees, Nanaimo, 3 cottage type schools. $240,000.

Man., Tuxedo—Province of Manitoba, c/o Ministry of Educ., Winnipeg, normal school. $150,000.

N. B., Fredericton—University of New Brunswick, c/o Brigadier M. G. Gregg, vc. pres., women's residence. $150,000.

N. B., Port Elgin—Province of New Brunswick, c/o Ministry of Education, Fredericton, regional high school. $150,000. Dpt. P. Wks., Fredericton, engrs.

Ont., Cornwall—Cornwall General Hospital, F. Stidwell, secy., plans by C. C. Woods, 413 Briar Hill Ave., Toronto, 3 story, Z-shaped, rein.-con., brick, etc. addn. general hospital, 2 St. E. $200,000.

Ont., Sault Ste. Marie—Municipality, community centre and artificial ice arena. $400,000.

Ont., Toronto—Dpt. Agriculture, Fruit Branch, Parliament Bldgs., cold storage and marketing plant, in Holland Marsh Area. $100,000.

★**Ont., Toronto**—Victoria College Bd., c/o Dr. W. T. Brown, pres., Queens Park, college library addn. and residential home for women. $1,000,000. Campaigning for funds.

★**Ont., Toronto**—Workmen's Compensation Bd., Canada Life Bldg., convalescent and rehabilitation hospital. $1,500,000.

Que., Lennoxville—Bishop's College Bd., c/o Rev. Dr. A. H. McGreer, principal, Lennoxville, residence for student's science bldg. $400,000.

★**Que., Montreal** — Children's Memorial Hospital Bd., Cedar St., plans by J. C. McDougall, 1235 McGill College Ave., children's memorial hospital. $600,000.

★**Que., Montreal**—Dominion Govt., Dpt. Veterans Affairs, Ottawa, Ont., plans by McDougall & Friedman, 1221 Osborne St., Sir Arthur Memorial Military Hospital, $1,500,000. J. M. Eugene Guay, Inc., 1010 St. Catherine St. W., engr.

Que., Noranda — Municipality, hospital. $250,000.

Que., Quebec City—Municipality, 150-bed children's hospital. $200,000.

★**Que., Three Rivers**—Province of Quebec, Quebec City, sanatorium addn. $300,000. Architect, c/o Dept. Health, Quebec City.

BIDS ASKED

Bids Asked After January 12

†**Tex., Fort Sam Houston**—U. S. Eng., Fort Sam Houston, frame barracks and bldgs. alterations, addns., for AGF and ASF Redistribution Station. $150,000.

Bids Asked January 23

†**Md., Pomonkey**—At offices Bd. Educ. Charles Co., La Plata, 1 story, part bsmnt. school, Md. 18-226. $80,000. FWA. Plans deposit $10. J. J. Baldwin, 927 15 St. N.W., Wash., D. C., archt. CD 10/13—ENR 10/19.

N. C., Kinston—City, A. K. Barrus, chn. Bd., at office J. J. Rowland, archt., Kinston. R. H. Lewis School, 2 story, 8 classroom, cafeteria and auditorium. Plans deposit $25, general; $15 for plumbing, heating and electrical work.

Bids Asked January 26

†**Ariz., Phoenix**—St. Monica's Hospital, 7 Ave., contagious disease ward, Ariz. 3-3. FWA. Lescher & Mahoney, Title & Trust Bldg., archts. CD 8/18—ENR 8/24.

Bids Asked January 27

†**Mont., Missoula**—St. Patrick's Hospital, Missoula, nurse's home addn., Mont. 24-3 N. $200,000. Extended date. FWA. H. Kirkemo, Missoula, archt. CD 11/21—ENR 11/30.

Bids Asked January 30

★†**Md., Dundalk** (br. Baltimore)—offices Bd. Educ. Baltimore Co., Towson, 3 story, center section, flanked by 1 and 2 story wings, high school, Md. 18-905-C $790,000. FWA. Plans deposit $60. Palmer & Lamdin, 1020 St. Paul St., Baltimore, archts. CD 12/19—ENR 12/21.

Bids Asked January 31

†**O., Martins Ferry**—Martins Ferry Hospital Assn., Martins Ferry, hospital, Ohio 33-282-N. $214,800. FWA. Plans deposit $25. F. Faris, 1117 Chapline St., Wheeling, W. Va., archt. CD 10/19—ENR 10/26.

Bids Asked February 2

†**Calif., Oxnard**—Oxnard School Dist. of Ventura Co., school, Calif. 4-653. FWA. R. C. Wilson, Santa Paula, archt. CD 12/21—ENR 1/4.

Bids Asked About February 7

†**Mo., Fort Leonard Wood** (br) **St. Louis**—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., 1 story, 50x120 ft., civilian assembly and recreation bldg., Docket 21-[illegible] FWA. La Beaume & Klein, 315 N. 7 St., St. Louis, Zone 1, archts. CD 1/3—ENR 1/[illegible]

Bids Asked February 20

†**Miss., Gulfport**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., Acute Bldg. 57. CD 2/14—ENR 2/24.

Bids Asked About February 28

Pa., Hatfield—Boro, H. R. Davis, pres., 102 Broad St., power plant addn. $40,000. H. E. Cori, 1316 Arch St., Phila., engr.

LOW BIDDERS

†**D. C., Anacostia**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., Jan. 12, fire control school, Naval Receiving Station, NOY 11410, from V. R. Beauchamp, 2601 Connecticut Ave. N.W., Wash., D. C., $158,866.

★†**D. C., Wash.**—National Capital Housing Auth., 1757 L St. N.W., Jan. 10, 60 unit family dwellings, DC 1-13, from Hart Const. Corp., 26 Court St., Brooklyn 2, N. Y., $2,359,400. CD 1/5—ENR 11/16.

Ill., Peoria — Div. Purchase, Sales & Traffic, Dpt. Agriculture, 14 St. and Independence Ave. S.W., Wash. 25, D. C., Jan. 9, semi-works plants at Northern Regional Research Laboratory, from J. Jobst & Sons, Lehmann Bldg., $68,800.

★†**Md., Bethesda** (br. Wash., D. C.)—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., Jan. 12, occupational and recreation bldg., Naval Medical Center, NOY 9769, from John McShain, Inc., 1101 Wilson Blvd., Rosslyn, Va., $765,130. CD 12/28.

★†**Mich., Dearborn**—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., Jan. 9, addnl. bldgs., utilities, etc., Proj. No. 2079, from F. H. McGraw & Co., 780 Windsor St., Hartford, Conn., $2,998,447. CD 11/22—ENR 11/30.

Miss., Batesville—City, D. Ferguson, mayor, Jan. 3, 1 story, 127 x 147 ft. glove factory, tile, stucco, concrete, steel frame, from Currie & Corley, Raleigh. $58,750. CD 12/7—ENR 12/28.

†**Pa., Bruceton**—Bureau Mines, H. E. Greenwold, constr. supt., 4800 Forbes St., Pittsburgh, general contract field office and excav. for research and development laboratory for synthetic liquid fuels, from Hinman Bros. Const. Co., Investment Bldg., Pittsburgh, $91,520. CD 9/16—ENR 9/21.

CONTRACTS AWARDED

★**Conn., Rocky Hill**—State Comptroller's Office, State Office Bldg., Hartford, brick steel infirmary addn. U. S. Veterans Hospital to A. E. Stephens Co., 1300 Main St., Springfield, Mass. $699,700. CD 12/23—ENR 1/3 under LB.

★†**Ill., Granite City**—U. S. Eng., $16 U. S. Courthouse & Customhouse, St. Louis, Mo., Warehouse 5, incl. interior and exterior utilities thereto, railroad work, stone surfacing, surface drainage sys., etc., Neg. 23-065-45-75, to Bauer Bros. Constr. Co., 42 Lebanon Ave., Belleville. $713,427. Bid 12/29.

†**Mich., Royal Oak**—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland 15, O., 50 unit temporary family dwellings, Mich. 20237, to Bush Const. Co., 370 Lexington Ave., New York, N. Y., $337,530. Bids 10/3, CD 9/26—ENR 9/28, under Detroit.

†**N. C., Camp Lejeune** (**New River**) (br. New Bern)—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C.

PUBLIC BLDGS. (Contracts Awarded, Cont'd.)

C., 4 wards, Naval Hospital, NOY 10254, Goode Constr. Corp., Blythe Bros., Harson-Wright Co., Camp Lejeune, $326,500. Bids 12/22. CD 12/6, under New River.

†N. C., Morehead City—Federal Works ency, 606 State Planters Bank Bldg., ichmond 19, Va., 3 story, addn. Morehead ity Hospital, NC $1-292, to Seaboard onstr. Co., Winston Salem, $191,400. Bids /11. FWA. CD 1/2—ENR 1/4.

†Ore., Corvallis—U. S. Eng., 628 Pittock Block, SW. 10 Ave. and Washington St., ortland, 35,000 prefabricated wooden bulkeads of 17,500 Quonset huts, to Beaver abinet Works, Corvallis. $3,000,000. warded 1/1.

†Tex., Benbrook—U. S. Eng., 231 W. Main t., Denison, cafeteria addn., Government-wned Aircraft Plant 4, Constr. W-41-242-ng-378, to J. W. Bateson Co., Irwin-Keasler Bldg., Dallas. $175,980.

†Utah, Ogden—U. S. Eng., 580 S. State t., Salt Lake City, addns. to locomotive epair shop and building at Ogden Arsenal, to R. J. Daum, 624 Beacon Bldg., Salt Lake City, $50,285. Bids 1/2.

N. S., Halifax—Dominion Govt., Ottawa, Ont., machine shop addn., to Acadia Constr. Co. Ltd., 101 Upper Water St., $90,000. Dpt. Munitions & Supply, Ottawa, Ont., engr.

Ont., Ottawa—Dpt. Natl. Defense (Army), Ottawa, 112x190 ft. garage, Lansdowne Park for R.C.A.S.C., to M. Sullivan & Son, Ltd., Arnprior, $55,000.

Que., Granby—School Comn., Granby, altering college, to Bernard & Guay, Granby. $210,000.

COMMERCIAL BUILDINGS

PROPOSED WORK

★Calif., Los Angeles—District Reorganization Corp., 548 S. Spring St., 1,200 unit housing on site south of Imperial Hy., between Avalon and Alameda Blvds., Willowbrook-Enterprise Dist. $4,000,000.

Colo., Denver—I. Hirsch & Son, 29 St. and Colorado Blvd., plans by C. D. Strong, C. A. Johnson Bldg., two 2 story, brick bldgs., containing 20 housing units. $150,000.

Md., Cheltenham—Cheltenham School for Boys, Cheltenham, plans by Ross & Walton, Hyattsville, dining hall, etc. $150,000.

Mass., Roxbury — Children's Hospital, 300 Longwood Ave., completing plans by Coolidge, Shepley, Bulfinch & Abbott, 1 Court St., Boston, brick, steel out-patient hospital addn., Longwood Ave. $150,000.

Mich., Flint—St. Joseph Hospital, F. A. Bower, chn. of Bd., Flint, plans by Schmidt, Garden & Erikson, 104 S. Michigan St., Chicago, Ill., 4 story, bsmnt., brick steel, concrete nurses home, connecting tunnel for steam piping. $450,000.

Pa., Ambler — Nesbitt Apartments, R. Thurber, McKean Rd., repairing 4 story apartment. $150,000.

Pa., Harrisburg—St. Patricks Cathedral, Very Rev. Peter M. Stief, pastor, 208 State St., bids soon, cathedral alterations, addns. $150,000. H. D. Dagit & Sons, 1329 Race St., Phila., and B. E. Starr, 239 Woodbine St., Harrisburg, assoc. archts.

W. Va., Weirton—Weir-Cove Community Center Assn., community center, incl. swimming pool, gymnasium, auditorium, bowling alleys, cafeteria, and rooms, etc. $390,000-$500,000.

N. B., Woodstock—N. B. Realties, Ltd., Woodstock, store and office bldg. $150,000.

N. S., Halifax—Bd. Directors of Labour Temple Assn., N. Park St., reconstructing labour temple. $200,000.

N. S., Halifax—Navy League of Canada, Barrington St., recreation hall and sports centre, Barrington St., opposite Bishop St. $150,000. Site purchased.

Ont., Atikokan—Steep Rock Iron Mines, Ltd., Atikokan, 200 dwellings on 108 acre townsite, 5 mi. from mine. Over $400,000.

Ont., Windsor—Sisters of Hotel Dieu, 1014 Ouelette Ave., plans by J. C. Pennington, Canadian Bank of Commerce Bldg., maternity and pediatrics department addn. to hospital. $175,000-$200,000.

★Que., Montreal—McGill University, Sherbrooke St. W., residences for male students. $950,000; power house addn. $300,000.

Que., Montreal—Montreal Roman Catholic Episcopal Corp., Lagauchietiere St. W., church, Park Maisonneuve. $150,000.

★Que., Montreal—Royal Victoria College Bd., 555 Sherbrooke St. W., college addn. $750,000.

Que., Quebec City—G. Tanguay, 86 St. Louis Rd., Quebec City, dwellings. $150,000.

Que., Rock Island—R. C. Parish of Our Lady of Mercy, c/o Rev. H. O. Desere, Rock Island, church. $150,000.

Que., Thetford Mines—St. Noel Chatanel Parish, Notre Dame St., plans by J. B. Gagnon, 326 Notre Dame St., church and presbytery. $175,000.

CONTRACTS AWARDED

Conn., Naugatuck—R. Pasko, 229 Church St., brick, steel theatre, Church St., to W. J. Megin, Inc., 51 Elm St. Est. $160,000.

Mich., Detroit—Mt. Carmel Mercy Hospital, 6071 W. Outer Dr., 4 story, brick, steel, concrete hospital addn., to Darin & Armstrong, 2041 Fenkell Ave. Est. $150,000. CD 9/1—ENR 9/7.

O., Columbus—Battelle Memorial Institute, 505 King Ave., brick, concrete, steel laboratory, to G. Reibel, 1782 Franklin Ave. Est. $250,000. D. Carmichael, 5 E. Long St., archt.

★O., Dayton — Hillcrest Homes, Inc., S. Eisenberger, pres., 729 Grand Ave., 60 unit 1½ story, bsmnt., brick home development program, southside of Hillcrest between Main and Catalpa Dr. Owner builds. $500,000.

Tex., Kingsville—Celanese Corp. of America, Bishop, 1 and 2 story dwellings for personnel, to Aikin & Hinman, P. O. Box 2350, Corpus Christi, $150,000. R. L. Vogler, 225 Oleander Ave., Corpus Christi, archt. CD 1/11.

Que., Baie Comeau—Baie Comeau Co. Ltd., Baie Comeau, repairing hotel, to Foundation Co. of Canada, Ltd., 1538 Sherbrooke St. W., Montreal, about $250,000. CD 2/10.

INDUSTRIAL BUILDINGS

PROPOSED WORK

Conn., Stratford — PLANT STORAGE — Chance Vought Aircraft Div., 550 Main St., soon lets contract metalite sys., paint storage bldg. Albert Kahn Associated Architects & Engineers, Inc., 345 New Center Bldg., Detroit, Mich., engrs.

Conn., West Haven (br. New Haven)—FACTORY—A. F. Holden Co., 52 Richards St., making plans 1 story, brick, steel factory, 1 story, 35x150 ft., corrugated iron emergency bldg. Over $40,000. L. F. Caproni, 1221 Chapel St., New Haven, engr. CD 1/12.

Ind., Bourbon—PLANT—Mid States Corp., Bourbon, rebuilding plant. $40,000 or more.

Me., Sangerville — PLANT — Sangerville Woolen Co., Carleton Mill, Sangerville, rebuilding 2 upper floors 4 story plant. To exceed $50,000.

Md., Rockville—FACTORY, etc.—Lofstrand Co., Silver Springs, plans by A. H. MacIntyre, 1920 Eye St. N.W., Wash., D. C., 2 story and 1 story brick, steel, factory and office. $50,000.

Mich., Monroe—PLANT—Monroe Tool Mfg. Co., Monroe, plans by S. M. Jokel, Monroe, 1 story, brick, steel, tool plant addn. $40,000.

N. J., Cranford—PLANT—Johnson & Johnson, F. N. Manley, plant engr., 500 George St., New Brunswick, plans by Ballinger & Son, engrs.-archts., 105 S. 12 St., Phila., Pa., 1 story, part bsmnt. mfg. plant on site west of Walnut St. between Lehigh Valley R. R. and Raritan Rd. $250,000. CD 11/20—ENR 11/23.

N. J., Englewood—PLANT—Solo Products Co., Cedar Lane, plans by P. H. Butler, 263 Elm Ave., Teaneck, 1 story, 140x140 ft., concrete block, brick veneer mfg. plant. $50,000.

N. C., High Point—MILLING PLANT—W. A. Davis Milling Co., High Point, rebuilding milling plant. Over $40,000.

O., Columbus—WAREHOUSE, etc.—Minneapolis Moline Power Equip. Co., 4444 N. Front St., brick, steel, warehouse and distr. bldg., Grandview Sect. $175,000.

O., Warren—FACTORY—Taylor-Winfield Corp., Warren, 100x122 ft. factory. $65,000.

Ore., Salem—CANNERY, etc.—Blue Lake Producers Cooperative, A. F. Lamb, asst. genl. mgr., Salem, rebuilding cannery and warehouse. $350,000.

Pa., Johnstown—FACTORY—Air Reduction Sales Co., 60 E. 42 New York, N. Y., rein.-con., steel factory. $287,101.

Pa., Phila.—PLANT—Abrasive Co., H. E. Bauer, plant engr., Tacony and Fraley Sts., mfg. plant alterations. $250,000.

Pa., Pittsburgh—BOILER HOUSE—F. J. Kress Box Co., 1 28 St., boiler house, with coal unloading hopper, installing coal handling equip., track hopper and conveyor. $51,631.

Pa., Pittsburgh—FREIGHT TERMINAL—Lancaster Transportation, A. Yardis, mgr., 804 Shore Ave., soon lets general contract. 1 story, 150x150 ft., brick, steel freight terminal. $50,000. S. Barbalet, 727 Bakewell Bldg., Pittsburgh, archt. CD 1/4—ENR 1/11.

S. C., Lyman—PLANT—Pacific Mills, Lyman, at office Lockwood-Greene, archts., Spartanburg, soon lets contract plant addn., for Pacific Mills, Lyman. Over $40,000.

Tex., Brookshire—FOOD LOCKER—Waller Co. Food Locker, c/o H. Guiberson, engr., 366 Blevins St., Fort Worth, soon lets contract 1 story, 40x80 ft., frozen food locker, brick, tile, concrete fdn., incl. quick freeze facilities and slaughtering department.

Tex., Hempstead—FOOD LOCKER—Waller Co. Food Locker, c/o H. Guiberson, engr., 366 Blevins St., Fort Worth, soon lets contract 1 story, 42x85 ft. frozen food locker plant, brick, tile, rein.-con. fdn., incl. quick freeze facilities and slaughtering department.

Tex., Falfurrias—LUMBER YARD—Alamo Lumber Co., Falfurrias, lumber yard. $45,000.

Tex., Junction—PLANT—E. R. Borden, Junction, hollow tile, rein.-con., frozen locker and processing plant. $40,000.

★Tex., Port Arthur — PLANT — Jefferson Chemical Co., c/o American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, New York 20, N. Y., and Texas Co., Port Arthur, chemical plant to convert waste oil into chemicals. $20,000,000. Engineers, c/o owners, starting working plans.

Wash., Yardley—ICING PLANT—Northern Pacific Ry. Co., B. Blum, ch. engr., 176 E. 5 St., St. Paul, Minn., enlarging icing plant from 3,000 to 5,000 ton cap. $79,900.

Wis., Cedarburg — FACTORY — Kieckhaefer Corp., Cedarburg, plans by Eschweiler & Eischweiler, 720 E. Mason St., Milwaukee, Zone 2, 2 story, 50x75 ft., brick, concrete block factory addn.

Wis., Marshfield—BOILER HOUSE, etc.—Marshfield Dairy Products Co., 104 W. Depot St., 1 story boiler house, 1 story warehouse, both brick, concrete fdns.

Wis., Milwaukee—HIDE HOUSE—J. Greenebaum Tanning Co., 2625 S. Greeley St., Zone 7, plans by Grassold & Johnson, 734 N. Jefferson St., Milwaukee, Zone 2, 1 story, steel, brick, concrete hide house.

Wis., Nekoosa—FACTORY—Nekoosa-Edwards Paper Co., Nekoosa, 4 story, bsmnt., 63x73 ft. bleach plant; 1 story, bsmnt., 53x75 ft. filter bldg., both concrete, and steel concrete fdns. C. F. Watson, c/o owner, engr.

Wis., West Allis (br. Milwaukee)—STORAGE—Allis Chalmers Mfg. Co., 1126 S. 70 St., plans by C. E. Meyer, c/o owner, 1 story, 60x500 ft., concrete, steel, brick, sheet metal pattern storage bldg. $30,000.

B. C., New Westminster—PLANT—T'Sable River Logging Co., Ltd., 613 Columbia St., logging and lumber plant, saw mill, etc. $50,000.

B. C., Phillips Arm (via Vancouver)—DEVELOPMENT PROGRAM—California B. C. Gold Mining Corp., Phillips Arm, plans development program. $150,000 appropriated.

B. C., Vancouver—PACKING PLANT—Alberta Wheat Pool, Calgary, Alta, packing plant. $50,000.

B. C., Vernon — SUBSTATION — West Canadian Hydro-Electric Corp., Vernon, substation. $40,000.

N. B., Fredericton—ABATTOIR—Capital Co-Operative, Ltd., Fredericton, abattoir. $50,000.

★North West Territories, Yellowknife — MINING DEVELOPMENT—Giant Yellowknife Mines, Ltd., Yellowknife, addnl. construction and development of mines. $2,000,000 available.

North West Territory, Yellowknife—DIA—MOND DRILLING, etc.—Yelloret Mines Ltd., Yellowknife, plans development and diamond drilling under waters of Yellowknife Bay. $200,000.

Ont., Belleville — WAREHOUSE — Good Rich Refining Co., Ltd., 139 Dundas St. E., 1 story warehouse. About $83,000.

Ont., Bradford—WAREHOUSE—Bradford Co-Operative Storage, Ltd., J. Snider, pres., C. Davis, secy., Bradford plans by Margison & Babcock, 137 Wellington St. W., Toronto, storage warehouse. $125,000. CD 1/2—ENR 1/4.

Ont., Cornwall—PLANT—Cornwall Dist. Co-operative, Inc., c/o G. A. Speer, Cornwall, plans cereal, fruit and vegetable processing plant. $50,000.

Ont., Fort William—PLANT—Great Lakes Paper, Ltd., Fort William, exten. plants. $300,000.

Ont., Oshawa—PLANT—General Motors of Canada, Ltd., Oshawa, interior alterations, west plant, $350,000; cafeteria bldg. at plant, about $100,000.

Ont., Ottawa—PLANT—Bentec Gold Mines Ltd., c/o A. McCrea, 63 Spark St., mining, milling plant. $40,000.

Ont., Ottawa — FACTORY — Co-Operative Arc d 'Ottawa, c/o L. J. Billy, 209 Cathcart St., factory. $40,000.

Ont., Ottawa—WAREHOUSE—A. J. Fresmale, Ltd., 73 Rideau St., 60x137 ft. warehouse, Gladstone Ave. $50,000.

Ont., Sudbury—PLANT—Kormax Lumber Co. Ltd., Sudbury, logging plant, saw mill and allied plant. $50,000.

INDUSTRIAL BLDGS. (Proposed Work, Cont'd.)

Ont., Toronto — PLANT — Theatre Candy Bars Ltd., c/o J. Rosenfeld, 21 Dundas Sq., candy bar, chocolate and general confectionary mfg. plant. $40,000.

Ont., Toronto — MARKET — Toronto Merchandise Mart Ltd., c/o E. Mitchell, 115 Dowling Ave., public market. $40,000.

Ont., Windsor—PLANT—Flex-O-Tube Co. Canada, Ltd., c/o G. E. Horne, accountant, Windsor, hose connection applying to flexible tubing mfg. and assembling plant. $40,000.

Que., Gatineau (near Hull)—PLANT IMPROVEMENTS—International Fibre Board, Ltd., Gatineau, plant imprvs. About $340,000.

Que., Longueuil—PLANT—Utah Electronics Canada Ltd., Longueuil, plant. $40,000.

Que., Montreal—FACTORY—Credit Foncier Franco Canadian, Inc., 5 E. St. James St., Montreal, plans by H. S. Labelle, 3 Kelvin Ave., Outremont, factory. $40,000.

Que., Montreal—PLANT—Dom. Glass Co. Ltd., 2376 Wellington St., modernizing plant. $100,000.

Que., Montreal — BOILER MOUSE — St. Lawrence Sugar Refineries, Ltd., 4026 Notre Dame St. E., boiler house and other alterations. $40,000.

Que., Rouyn — MILL — Astoria Quebec Mines, Ltd., Rouyn, 100 ton mill, appurtenances. $70,000.

Que., St. Pierre—PLANT—Eastern Wood Pipe & Tank Co. Ltd., St. Pierre, plant. $40,000.

Sask., Saskatoon—PLANT—Wilks Cycle & Auto Supply Co., Inc., 238 20 St., plans by J. Wilks, 238 20 St., plant. $40,000.

BIDS ASKED

Bids Asked After January 15

Tex., Pharr—PACKING PLANT—Texas Products Co., Pharr, 1 and 2 story food products packing plant, brick, tile, rein.-con., sheet metal. $150,000. CD 12/28—ENR 1/4.

Bids Asked January 22

Pa., Phila—PLANT—Gulf Oil Corp., Refinery Div., R. C. Roether, engr., J. O. Timms, supt., 30 St. and Penrose Ave., plant, concrete fdns. for steam down tower, accumulator tank flare drip tank and sump drainage pipe; concrete tank fdns., fire walls, concrete pipe caps, sump and drainage piping.

Bids Asked January 29

Mich., Detroit — FACTORY — Timken-Detroit Axle Co., 100 Clark Ave., brick, steel, concrete factory. $100,000.

Bids Asked About February 25

Tex., San Angelo—REPAIR SHOP, etc.—Westbrook Motor Co., San Angelo, 1 story, 130x130 ft. mechanical repair shop and storage bldg. $50,000. Howe & Wise, 610 Stewart Bldg., archts. CD 12/28—ENR 1/11, under Postwar Projects.

Bids Asked March 20

Ala., Huntsville—MILL—At office J. E. Sirrine & Co., engrs., Greenville, S. C., general reinforcing mill 2, consisting building 31 ft. rein.-con. buttresses and stiffening existing wooden floor beams by bolting to them approx. 160 ton structural steel channels, renovating, revamping office bldg., for Merrimack Mfg. Co., Huntsville. $90,000. Plans deposit $15 for bldg. reinforcing and $10 for office renovating.

Bids Asked

Pa., Phila.—PLANT—Oxford Dye Works, 1408 E. Oxford St., Creth & Sullivan, Inc., agent, 1600 Walnut St., repairing 2 story plant. $40,000.

LOW BIDDERS

Miss., Philadelphia — FACTORY — Wells-Lamont Corp., Philadelphia, Jan. 2, general contract 1 story glove factory, from Walter J. Perry Contg. Co., Philadelphia, **$58,820.** CD 12/22—ENR 12/28.

CONTRACTS AWARDED

★ **Calif., Wilmington**—PLANT BLDGS.—Union Oil Co. of Calif., 627 W. 7 St., Los Angeles, group administration bldgs., incl. administration, cafeteria, personnel, storage, shops, warehouse, salvage, garage, storage rack and machine shop bldgs., paving, underground utilities, drains and railroad trackage at Wilmington Refinery, to McNeil Const. Co., 5860 Avalon Blvd., Los Angeles, approx. **$3,000,000.** C. Beelman, Union Bank Bldg., Los Angeles, archt. CD 7/6—ENR 7/13.

Colo., Alamosa—BOILER PLANT—Denver & Rio Grande Western R.R., A. E. Perlman, ch. engr., 1531 Stout St., Denver, boiler plant extens., addns. to Stearns-Roger Mfg. Co., 1720 California St., Denver, **$43,000.**

Fla., Jacksonville—LAUNDRY, etc.—National Linen Service Corp., 445 Highland Ave. N.E., Atlanta, Ga., 2 story, brick laundry and linen service plant, to L. B. Jackson, Jackson Bldg., Asheville, N. C., approx. **$80,000.** Awarded 1/5. R. H. Edney, Jackson Bldg., Asheville, N. C., archt.

Ill., Chicago—FACTORY—Radio Steel & Mfg. Co., 6515 W. Grand Ave., 1 story, 97x155 ft. factory addn., to Abell-Howe & Co., 53 W. Jackson Blvd. Est. **$60,000.** C. A. Metz, 224 S. Michigan Ave., engr.

Md., Curtis Bay (sta. Baltimore)—PLANT—Brooklyne Chemical Works, 9 St. and Patapsco Ave., 1 story, T-shaped, 40x170 ft., and 50x70 ft., chemical plant, 930-2 Chart St., to Baltimore Contractors, 711 S. Central Ave., Baltimore, **$40,000.** H. L. Katz, 3212 Gwynns Falls Parkway, Baltimore, archt.

Mass., Dorchester (sta. Boston)—PLANT—Boston Ice Co., 268 Heath St., 1 story, 50x250 ft., brick, concrete artificial ice mfg. plant, to Foorvu Constr. Co., 294 Washington St. To exceed **$50,000** with equip. CD 12/29—ENR 1/4.

Mass., Springfield—POWER and HEATING PLANT—Smith & Wesson, 55 Stockbridge St., concrete, brick, steel electric power and heating plant, to Ernest F. Carlson, Inc., 1694 Main St. Est. over **$50,000.**

Mich., Detroit—TEST HOUSE—Continental Motors Corp., 12801 E. Jefferson Ave., brick, concrete test house for engine plant, to F. H. Martin, 955 E. Jefferson Ave. Est. **$75,000.**

Mich., Detroit—PLANT—Detroit Brass & Malleable Works, 100 S. Campbell St., 1 story, brick, steel, concrete factory, to Austin Co., 429 Curtis Bldg. Est. **$40,000.** CD 12/26—ENR 12/28.

Mich., Detroit—MANUFACTURING, etc.—Johnson Piston Ring Co., 6010 Woodward Ave., brick, steel, concrete mfg. bldg. and office, to The Clausen Co., 15529 Woodrow Wilson Ave. Est. **$50,000.**

Minn., Minneapolis—FORGE SHOP—Lewis Bolt & Nut Co., 506 Malcolm Ave. SE., general contract rebuilding forge shop, to Victor Carlson & Sons, 2853 Park Ave. Est. **$50,000.** Toltz, King & Day, 1509 Pioneer Bldg., St. Paul, archts.

Minn., Mora — PLANT — Land O' Lakes Creameries, Inc., L. L. Getten, production mgr., 2201 Kennedy St. N.E., Minneapolis, general contract 1, 2 and 3 story, 144x150 ft. milk dehydrating plant to J. B. Nordenstrom, Mora. Est. about **$100,000.** CD 12/13—ENR 12/21.

Mont., Billings—BUS DEPOT, SHOPS, etc.—Grayhound Stag Lines, 2605 1 Ave. N., 1 story, masonry bus depot with shops, offices, etc., to James Leck Co., 211 S. 11 St., Minneapolis 2, Minn., **$90,000.** (Correction—Contractor's name and amount). J. G. Link & Co., Electric Bldg., archt. CD 11/8—ENR 11/16, under CA.

N. J., Kearny (br. Arlington)—CAFETERIA—Poliack Mfg. Co., 541 Devon St., 1 story, 80x112 ft., brick, concrete cafeteria, to Becker Const. Co., 361 Grove St., Newark, **$50,000.** E. Horstmann, 526 Elm St., archt.

N. J., Newark—PLANT—Peerless Imperial Co., 407 Mulberry St., altering 40x300 ft. plant, to Brandstatter Concrete Co., 129 Ellery Ave., **$50,000.** CD 12/1—ENR 12/7.

N. J., Newark—STORAGE—Rubberset Co., 56 Ferry St., 1 story, 50x100 ft., frame storage bldg., to Vitale Bros. Co., 123 Columbia Ave., **$45,000.**

N. J., Piscataway (P. O. Bound Brook)—BOILER HOUSE, etc.—Benzol Products Co., Meadow Rd., 1 story, brick, steel boiler house and coal silo, to C. J. Schubert, 93 Arsdale Terrace, East Orange, **$100,000.** Bids 8/25. CD 8/18—ENR 8/17.

N. J., Roselle Park (br. Elizabeth)—WAREHOUSE—A. & M. Karaghusian, Inc., 450 Westfield Ave. W., 1 story, 200x200 ft., brick veneer warehouse, to Wigton-Abbott Corp., 1225 South Ave., Plainfield, **$495,000.**

O., Canton—FACTORY—Hercules Motors Corp., 201 11 St. S.E., 1 story factory addn., rear 201-11 St. S.E., to Melbourne Bros. Constr. Co., Mellet Bldg., **$50,000.** Awarded 1/10.

Ore., Newport—STORAGE, etc.—Columbia River Packers Assn., Astoria, 1 story, 47x60 ft. ice and fish storage bldg., 1 story, 27x60 ft. crab cleaning and packing plant, force account. **$50,651.**

Ore., Portland — WAREHOUSE — Railway Express Agency, 226 S.W. Bway., 2 story air express bldg., 5 and Hoyt Sts., to G. V. Isackson, 3297 N.E. Irving St., **$143,000.** Awarded 1/2. CD 10/30—ENR 11/2.

Ore., Salem — WAREHOUSE, etc. — Blue Lake Producers Cooperative, West Salem, warehouse and cannery, to E. E. Batterman, 147 N. Commercial St. Est. **$120,000.** L. P. Bartholomew, Salem, archt. CD 1/11.

Pa., Phila. — PLANT BLDGS. — Gulf Oil Corp., Refinery Div., R. C. Roether, engr., 30 and Penrose Ave., bldgs., to Henry E. Baton, Inc., 1717 Sansom St., **$50,000.** Awarded 1/9. CD 12/7—ENR 12/14.

Pa., Reading—PASSENGER STATION PLATFORM—Reading Co., E. Y. Allen, ch. engr., Reading Terminal, Phila., Zone 1, passenger station platform, Reading, Pa., station, day labor. **$55,000.**

Pa., Rochester — WAREHOUSE — Michael Meier Glass Co., W. Meier, mgr., Rochester, 1 story, 90x190 ft., brick, steel frame warehouse addn., North Rochester, day labor. **$40,000.** Foundation in.

Pa., Wyndmoor (mail Phila.)—MANUFACTURING PLANT—The Century Vault Co., c/o P. B. Sloat, 1150 E. Mermaid Lane, mfg. plant. Owner builds. $50,000-$75,000.

Tex., Decatur — GARAGE, etc. — Decatur Ice Co., Decatur, 2 story, brick, structural clay tile, concrete garage and warehouse, force account. **$48,000.** P. M. Geren, 1004 Burnet St., Fort Worth, archt. CD 1/1—ENR 1/11.

Tex., Monte Alto (near Edcouch)—PLANT—Mid-Valley Cooperative Canning Co., Edcouch, 1 story, 100x200 ft. citrus and vegetable packing plant, concrete, metal, day labor. **$40,000.** CD 5/12—ENR 5/25.

Tex., San Antonio—REPAIR SHOP—Kerrville Bus Co., Kerrville, 70x105 ft., structural tile, rein.-con., mechanical repair shop, to C. L. Browning, Jr., 812 Ins. Bldg., **$40,000.** Bids about 1/7. CD 1/4—ENR 1/11.

Tex., Trenton—LOCKER PLANT—Trenton Refrigerating Co-operative, Trenton, locker plant, to L. F. Southerland & J. Wilson, Trenton. **$40,000.** CD 1/4—ENR 1/11.

Wis., Appleton—FACTORY—Institute of Paper Chemistry, 1101 E. South River St., 1 story, bsmnt., 40x160 ft., rein.-con., steel factory, to Ben B. Gauther Co., 78 State St., Oshkosh. Orbison & Orbison, 206 W. College Ave., engrs.

Wis., Milwaukee — FACTORY — Eclipse Molded Products Co., 5150 W. 32 St., Zone 9, 1 story, 100x112 ft., structural steel factory addn., block fdn. and walls, to Val Schramka Bldg. Co., 3832 N. Hubbard Ave., Zone 12. Est. **$40,000.** U. F. Peacock, 720 N. 32 St., Zone 8, archt.

B. C., Prince Rupert — PLANT — Prince Rupert Fishermen's Co-operative Assn., cold storage plant, Fairview Bay, to Dominion Const. Co. Ltd., 150 W. 1 Ave., Vancouver, about **$150,000.**

★ **Ont., Hamilton**—FACTORY—Firestone Tire & Rubber Co. of Canada, Ltd., Beach Rd., brick, steel, rein.-con. factory addn., to Frid Const. Co. Ltd., 126 King St. E. about **$600,000** equipped. Hutton & Souter, 36 James St. S., archts.

Ont., Toronto—PLANT—W. L. Ballantine, Ltd., 380 Fleet St., W., 2 story, Z-shaped, brick, steel plant addn., 380 Fleet S.W., to Ramsay Contg. Co. Ltd., 39 Indian Rd. Cres. cent, about **$45,000.** CD 11/21—ENR 11/30

Que., Montreal — BOILER HOUSE — National Licorice Co., Inc., 4211 Rouen St., boiler house, to Purdy & Henderson Co. Ltd., 1414 Crescent St. Est. **$40,000.** H. W. Davis, 647 Belmont St., archt.

Que., Sorel — PLANT — Sorel Industries Ltd., Sorel, and 1405 Peel St., Montreal, general repairs to 60x800 ft. plant unit, day labor. **$100,000.**

Que., Westmount — FACTORY — Defense Industries, Ltd., 1135 Beaver Hall Hill, Montreal altering factory, to E. G. M. Cape & Co., Ltd., 620 Cathcart St., Montreal, about **$50,000.** Ross & MacDonald, 1010 St. Catherine St. W., Montreal, archts.

UNCLASSIFIED

PROPOSED WORK

Calif., Long Beach—TRANSIT SHEDS—City Harbor Dpt., 1330 El Embarcadero, two 60x340 ft., emergency transit sheds on west side of Pier D, Berths 32, 33 and 34. $30,000. R. R. Shoemaker, 1330 El Embarcadero, engr.

Conn., New Haven—PARK IMPROVEMENTS—City, Dpt. Parks, City Hall, plans completed Beaver Park athletic field, field house, comfort facilities, $57,000. V. Barry, Hall of Records, engr.

Indiana — PIPELINE — Eastern Indiana Gas Co., New Castle, constructing 3.7 mi. 3 in. pipeline beginning at point on Panhandle Eastern's Greenfield Lateral in Hancock Co. and exten. to point near Fortville and ½ mi. 2 in line running from proposed 3 in. line north to town of Ingalls. $20,000.

Indiana—PIPELINE—Panhandle Eastern Pipe Line Co., 99 and Holmes Sts., constructing, operating 3.7 mi. 3 in. pipeline beginning at point on 4 in. Greenfield lateral exten. west to point near Fortville, together with metering and regulating stations. $33,900.

Louisiana—GAS PIPELINE—Shell Oil Co. Inc., Lake Charles, installing, maintaining 2½ in. gas pipeline under and across Bayou Black, at point about 0.7 mi. upstream from Greenwood Plantation Bridge at Humphreys, approx. 15.7 mi. above mouth of waterway in Terrebone Parish.

Mass., Falmouth—BATHHOUSE—Town, Park Dpt., plans by E. Gunnar Peterson, Oyster Pond Rd., 1 story, 35x110 ft., brick, masonry and wood frame bathhouse, concrete pile fdn. $35,000.

Minnesota — SERVICE EXTENSIONS — Douglas County Coop. Light & Power Assoc., Alexandria, service extens., Douglas Co. $30,000.

Minnesota—SERVICE CONNECTIONS—North Pine Elec. Coop., Inc., Finlayson, service connections, Pine Co. $50,000.

NCLASSIFIED (Proposed Work, Cont'd.)

Mississippi — SERVICE EXTENSIONS — nes County Elec. Power Assoc., Laurel, rvice extens., **Jones Co. $100,000.**

Mo., Springfield—AIRPORT—City, H. B. rr, mayor, plans $150,000 bond election n, completing Springfield-Greene County rport.

Montana—SERVICE EXTENSIONS—Yelstone Valley Elec. Coop., Inc., Huntley, rvice extens., Yellowstone Co. $25,000.

Neb., Wayne—STADIUM—State Bd. Educ. State Normal Schools, E. A. Larson, secy., pitol Bldg., Lincoln, bids soon concrete dium, with steel reinforcements. $40,000. hn Latenser & Sons, 1307 Farnam St., naha.

N. J., Hoboken—PIER REPAIRS—Todd ipways Corp., 1 Bway., New York, N. Y., Pier repairs, addns.

†N. M., Alamogordo—HANGAR—U. S. ng., P. O. Box 1538, Albuquerque, hangar. er $40,000.

†N. M., Albuquerque—HANGAR—U. S. ng., P. O. Box 1538, Albuquerque, hangar. er $40,000.

†N. M., Roswell—HANGAR—U. S. Eng., O. Box 1538, Albuquerque, hangar. Over 0,000.

North Carolina—POWER LINES—Central lectric Membership Corp., Pittsboro, 150 . electric power lines, Lee, Chatham, oore, Hoke and Wake Counties, $150,000.

†Okla., Oklahoma City—LIGHTING SYSEM—U. S. Eng., 416 Wright Bldg., Tulsa, ne 2, horizon electric lighting sys. at Will ogers Field, Serial 34-066-45-29. $25,000.

Oregon—SERVICE EXTENSIONS—Northst Clackamas County Elec. Coop., Inc., andy, service extens., Clackamas Co. $50,-0.

Texas — PIPELINE — Reynosa Pipe Line ., Corpus Christi, Tex., approx. 30 mi. 12¾ pipeline exten. south from La Blanca ield, Hidalgo Tex., through North and outh Weslaco fields in that county and hem there west to American shore, connectng with about 3,000 ft. 8⅝ in. parallel pipeines, these pipelines will be extended across nd underneath Rio Grande to the internaional border near Reynosa, Mexico, to conect with 14 in. transmission pipeline of Gas ndustrial de Monterey, S. A. Reynosa.

Texas—PIPELINES—Tennessee Gas & Transmission Co., Natl. Standard Bldg., ouston, constructing, operating varying ngths of about 65 mi. addnl. pipelines xten. from company's main Texas-to-West irginia line to Odem Field, San Patricio o., Riverside Field in Nueces Co., Quinto reek field in Jim Wells Co., Tom O'Connor nd Refugio fields in Refugio Co., Heard ield, Bee Co., Heyser, Placedo and Mcaddin Fields, Victoria Co. and Menefee and ungerford Fields in Wharton Co.; also lans dehydration plant on site of it's No. compressing station, Jasper Co., and 20 ouses for employees at compressing staions. $1,800,000.

†Texas — PIPELINES — United Carbon lack Co., Inc., Odessa, Tex., and United arbon Bldg., Charleston, W. Va., 93 mi. to 26-in. natural gas pipelines, vicinity of carbon black plants now under construcon. near Odessa, Ector Co. $225,000. Dense Plant Corp. will finance. Ford, Bacon Davis, 39 Bway., New York, N. Y. and Odessa, Tex., engrs.

Texas—SERVICE EXTENSIONS—Johnson County Elec. Coop., Assoc., Cleburne, service extens., Johnson Co. $60,000.

Texas — SERVICE EXTENSIONS — San Bernard Elec. Coop., Bellville, service extens. Austin Co. $60,000.

Texas — SERVICE EXTENSIONS — Swisher County Electric Coop. Inc., Tulia, service extens., Swisher Co. $75,000. CD 11/16 —ENR 11/23.

Texas — SERVICE EXTENSIONS — Wise Electric Coop. Inc., Decatur, service extens. Wise Co., $40,000.

†Tex., Camp Normoyle (San Antonio P.O.) —SPRINKLER SYSTEM—U. S. Eng., Fort Sam Houston, sprinkler sys. in warehouse and shops area, etc., Normoyle Center. Over $26,000.

†Tex., El Paso—SIGNALING SYSTEM—U. S. Eng., P. O. Box 1537, Albuquerque, N. M., electric signalling sys. for Wm. Beaumont General Hospital area. $25,000.

Tex., Pasadena—PIERS, etc.—Brown Shipbuilding Co., Industrial Rd., Houston, timber piling type piers, over $45,000; certain structures in ship channel for ship construction, $100,000; dredging work in ship channel area and building 1,350 lin. ft. steel sheet pile bulkhead, over $70,000.

Wash., Spokane — TRACKAGE, etc. — Great Northern Ry. Co., C. M. Nye, ch. engr., 175 E. 4 St., St. Paul, Minn., installing trackage, diesel fuel oil facilities, tanks and pumphouse. $56,200.

Wisconsin — SERVICE EXTENSIONS — Grant Elec. Coop., Lancaster, service extens., Grant Co. $150,000.

Wisconsin — SERVICE CONNECTIONS — Vernon Elec. Coop., Westby, plans service extens., Vernon Co. $100,000.

Ont., Oshawa—SWIMMING POOL—Municipality, artificial swimming pool in centre of city. $30,000.

Ont., Ottawa—SWIMMING POOL, etc.—University of Ottawa, Rev. P. Cornellier, Daly Ave., swimming pool and student centre. $100,000.

Ont., St. Thomas—AIRPORT—City, plans airport. $75,000. W. C. Miller, City Hall, engr.

Ont., Toronto—PARK IMPROVEMENTS—East York Twp., Toronto, imprv. public parks, on ravine parks land between Don Mills Rd. and Woodbine Park. $35,000.

Ont., Wallaceburg—RAILWAY SIDING, etc.—Pere Marquette Ry. Co., H. A. Cassil, ch. engr., General Motors Bldg., Detroit, Mich., exten. sidings, rearranging railway yards to take care of industrial expansion. $30,000-$35,000.

Que., Joliette—CEMETERY—R. C. Episcopal Corp., c/o Rev. O. Bonin, Joliette, cemetery imprvs. $25,000.

Que., Montreal—PLAYGROUNDS—Municipality, imprv. existing and constructing new playgrounds. $200,000.

Que., Montreal — SPORTS CENTRE — Municipality, rebuilding east-end sports centre. $200,000.

Que., Rimouski — AIRPORT IMPROVEMENTS—Dominion Govt., Ottawa, Ont., airport imprvs. $75,000. Dpt. Transport, Ottawa, Ont., engr.

BIDS ASKED

Bids Asked After January 10

†Kan., Salina—HANGAR, etc.—U. S. Eng., 10 E. 17 St., Kansas City, Mo., hangar and oil storage bldg. at Smoky Hill Airfield.

Bids Asked About January 25

†La., Kenner—RUNWAYS—U. S. Eng., Avenue F and 25 St., Galveston, Tex., exten. east-west runway at Moissant Airport. Bids of January 9 withdrawn, plans revised. CD 12/12—ENR 12/14.

LOW BIDDERS

†Ariz., Nogales — AIRPORT IMPROVEMENTS—Civil Aeronautics Admin., 1500 4 St., Santa Monica, Calif., Jan. 8, imprv. Santa Cruz County Airport, drainage, repairs, etc., grading, excav., rein.-con. pipe drains, etc., from P.D.O.C. Luhrs Bldg., Phoenix. **$102,064.**

N. J., Asbury Park—BOARDWALK—City, City Hall, boardwalk repairs from Casino Promenade to 510 ft. north to point at northern end of Convention Hall, from A. A. LaFountain, Inc., 161 Beech St., corner Railroad Ave., Hackensack, **$73,747.** CD 12/19—ENR 12/21.

O., London—DAM—Ohio State Dpt. Conservation, D. Waters, dir., State Office Bldg., Columbus, Dec. 19, dam for recreational area improvement, in Madison Co., from O. E. Liller, 207 S. Toland St., **$66,728.** Est. $32,000.

†Tex., Fort Worth—TAXIWAYS, etc.—Civil Aeronautics Admin., P. O. Box 1689, Jan. 5, taxiway exten., paving, grading, seeding, sodding, draining, marking and lighting taxiways, etc., Proposal 4-45-1764, Meacham Field, Contrs. 1 and 2, from L. H. Lacy Co., 3009 N. Henderson St., Dallas, **$147,346.** CD 12/19—ENR 12/21.

†Tex., Galveston—RADIO RANGE STATION—Civil Aeronautics Admin., P. O. Box 1689, Fort Worth, Zone 1, at Regional Office Bldg. c/o Haslet Rd., Fort Worth, Jan. 12, relocating ML radio range station, Galveston Airport, Proposal 4-45-1769, from Tellepsen Const. Co., 3900 Clay Ave., Houston, **$29,230.** CD 1/4—ENR 11/30.

†Wash., Fort Lewis—NURSES' CALL SYSTEM, etc.—U. S. Eng., 800 3 Ave., Seattle, Zone 4, Jan. 3, installing nurses' call systems and electric alarm sys. at Madigan General Hospital, Neg. 1072, from Wire Electric Co., 3580 S. Tacoma Way, Tacoma, **$38,526.**

CONTRACTS AWARDED

†Ariz., Flagstaff—SPRINKLER PROTECTION, etc.—U. S. Eng., 751 Figueroa St., Los Angeles 14, Calif., sprinkler protection and fire walls at Navajo Ordnance Depot, No. 50, to Bailey & McCoy, 1130 Lowell Ave., Tucson, **$298,000.** Bids 12/20. CD 12/27—ENR 1/4, under LB.

†Calif., Morro Bay—FIRE PROTECTION—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., fire protection Amphibious Training Base, Spec. 14799, NOY 10389, to E. T. Haas Co., P. O. Box 411, San Mateo, **$27,980.**

★**†Calif., San Diego—**AIR STATION IMPROVEMENTS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., installing steam and Air lines, Naval Air Station, NOY 10829, to Kenneth Fraser Co., 1452 N. Lake Ave., Pasadena, Zone 6, **$839,322.** Bids 12/21. CD 1/11, under LB.

†Calif., Van Nuys—NURSES CALL SYSTEM—U. S. Eng., 751 Figueroa St., Los Angeles, installing nurses call sys. in Birmingham General Hospital, No. 97, to Newbery Electric Co., 1038 Venice Blvd., Los Angeles. **$25,801.**

★**†Calif., Terminal Island—**PIER—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., Pier 6, Naval Dry Dock, Spec. 15309, NOY 10957, to United Const. Co., 411 W. 5 St., Los Angeles, **$2,556,408.** Bids 12/28. CD 1/4 under LB.

★**†Fla., Banana River—**NAVAL AIR STATION BLDG.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., 4 barracks, Naval Air Station, NOY 11126, to A. Blair, 1st Natl. Bank Bldg., Montgomery, Ala., **$288,125.** 4 barracks, NOY 11126, to Foster & Creighton Co., American Natl. Bank Bldg., **$283,400.**

†Fla., Boca Raton—AIRFIELD GRADING, etc.—U. S. Eng., Post Office Bldg., Savannah, Ga., grading, drainage, paving, Boca Raton Air Field, Contr. W-09-133-eng-530, to Ivy H. Smith Co., 1525 San Marco Blvd., South Jacksonville, **$92,850.** Bids 11/27. CD 11/21, under Streets, etc.

†Ga., Atlanta—RUNWAY RECONSTRUCTION—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., reconstructing runway, Naval Air Station, NOY 11291, to MacDougald Constr. Co., Northside Dr. N.W., **$46,303.**

†Ga., Chatham (br. Savannah)—AIRFIELD BLDGS.—U. S. Eng., Post Office Bldg., Savannah, addnl. bldgs., Chatham Army Airfield, Contr. W-09-133-eng-535, to E. Braun, 710 E. 50 St., Savannah, approx. **$84,648.**

★**†Ga., Chatham (br. Savannah)—**HANGARS, etc.—U. S. Eng., Post Office Bldg., Savannah, grading, paving, drainage, addnl. apron construction, etc., Chat-37-45, to Wm. F. Bowe & Co., 540 Reynolds St., Augusta, **$513,807.** Bids 1/3. CD 1/9—ENR 1/11, under LB.

Iowa — TRANSMISSION LINES — Clarke Electric Co-Operative, Inc., Osceola, 105 mi. transmission lines, Clarke Co., to A A Electric Co., Cicero, Ill., **$95,557.** Stanley Eng. Co., Muscatine, engr. CD 1/31/44—ENR 2/3/44.

★**†N. C., Cherry Point (br. New Bern)—**AIR STATION BLDGS.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash. 25, D. C., auditorium, administration bldg. addn., post exchange addn., incl. storage space, Marine Corps Air Station, Spec. 14814, NOY 10404, to H. L. Coble, Greensboro, **$587,300.** Bids 12/29. CD 1/8 under LB.

S. D., Alcester—TRANSMISSION LINES—Lincoln Union Electric Co., Alcester, 46.7 mi. transmission lines, to Jensen & Krage, 2220 Hawkeye Dr., Sioux City, Ia., approx. **$40,040.** Buell & Winter, 508 Insurance Exch. Bldg., Sioux City, Ia., engrs.

Tenn., Nashville—STOCK PEN, etc.—Neuhoff Packing Co., 1307 Adams St., double-deck rein.-con., frame, steel stock pen and tunnel under street, to A. Murphy, 802 Crescent Rd., **$50,000.**

Texas—PIPELINE CARRIER—Dow Chemical Co., Freeport and M & M Bldg., Houston, 79 mi. 4 in. welded joint steel pipeline carrier to move liquefied petroleum gases, starting near Katy going to Freeport, to Anderson Bros. Const. Co., Natl. Bank of Commerce Bldg., Tulsa, Okla., approx. **$379,000.** Est. $700,000. CD 11/28—ENR 11/30.

Texas—TRANSMISSION LINES—Upshur Electric Cooperative Corp., Gilmer, 50 mi. electric transmission lines, Upshur Co., to Electric Contg. Co., Gilmer, **$25,000.** CD 1/4—ENR 1/11.

†Tex., Briggs Field (br. El Paso)—WARM-UP PADS, etc.—U. S. Eng., Albuquerque, warm-up pads, hangar turnouts and runway exten., Contr. W-29-005-eng-300, to A. O. Peabody, Albuquerque Hy., Santa Fe, N. M. **$111,112.** CD 11/30—ENR 12/7.

†Tex., Fort Worth—RELOCATING HANGAR, etc.—U. S. Eng., 231 W. Main St., Denison, relocating, reconstructing hangar, and freight terminal bldgs., Army Airfield, Serial No. 41-242-45-88, to Samuel Johnson & Co., 1206 S. Mont Clair St., Dallas, **$66,000.** Bids 12/26.

†Tex., Waco—HEATING SYSTEM—U. S. Eng., Fort Sam Houston, gas-fired heating sys. for hospital bldgs., Serial No. W-41-154-45-54, to Port Industries, Brownsville, **$28,636.** Bids 12/7.

†Utah, Brigham City—SWIMMING POOL—U. S. Eng., 580 S. State St., Salt Lake City, swimming pool at Bushnell General Hospital, to Geo. E. Whitmeyer & Sons Co., 2759 Grant Ave., Ogden, **$123,944.** Bids 1/6.

†Va., Langley Field—HANGARS—U. S. Eng., Fort Norfolk, Norfolk, modification of hangars for training equip.-electrical, Contr. W-44-110-eng-372, to Howard P. Foley Co., Inc., 2020 I St. N.W., Wash., D. C. **$38,265.**

N. S., Halifax—DOCKYARD BLDG.—Dpt. Natl. Defense for Sea, Ottawa, Ont., exten. Machine Shop 25, at H.M.C. Dockyard, to Acadia Const. Co. Ltd., 107 Upper Water St. **$90,000.** Bids 12/5. CD 12/1.

Que., Dorval — AIRPORT BLDG. — Dpt. Munitions & Supply, Ottawa, Ont., equipment garage addn., alterations, at airport, to J. A. A. Lecair-Dupuis, Ltd., 630 Cathcart St., Montreal, about **$50,000.**

Proposal Advertisements see pp. 22, 23, 24

OFFICIAL PROPOSALS

Bids: Feb. 7 (348)

State Highway Work

STATE DEPARTMENT OF PUBLIC WORKS
BUREAU OF CONTRACTS & ACCOUNTS
ALBANY, N. Y.

Sealed proposals will be received by Henry A. Cohen, Director, Bureau of Contracts & Accounts, 14th Floor, Albany, N. Y., on WEDNESDAY, FEBRUARY 7, 1945, for the construction and reconstruction of highway projects in the following Counties:

County	Deposit for plans	Bid deposit	Type	Miles	Priority rating
Albany	$5	$11,000	Bit Mac. M. M. Opt.	6.34	.....
Greene	5	5,500	4" Concrete Widening B. M. M. Opt.	4.24	.....
			Concrete		Ser. No.
Nassau (Cons.)	5	7,000	9" TH. x 33'	0.90	131762 AA. 3
Otsego	5	120	Electrical Work	....	CMP.5 AMRO AA. 1
					Ser. No.
St.Lawrence (Cons.)	5	800	Grading & Drainage	2.50	133876 AA. 3
Schenectady	5	8,000	Bit. Mac. M. M. Opt.	6.31	.....

Maps, plans, specifications, and estimates may be obtained at the office of the Department of Public Works, Bureau of Contracts & Accounts, Albany, N. Y., and at the office of the District Engineer in whose district the roads are located. The names and addresses of the District Engineers will be furnished on request and may be seen at the office of the State Department of Public Works, State Office Building, Room 898, Worth & Center Streets, New York City.

The deposit for Plans and Proposal Forms for each contract containing 1 to 15 sheets is $5.00; 16 to 30 sheets, $10.00; over 30 sheets, $20.00. A refund will be made in full to bidders for return of one set, in good condition, within 30 days of award, or rejection of bids; refund for all other sets in good condition, similar period, will be 50% of deposit.

Special attention of bidders is called to "General Information for Bidders" in the proposal, specifications, and contract agreement, and to the special provisions applying to projects financed with federal funds.

Proposal for each contract must be submitted in a separate sealed envelope with the name and number of the contract plainly endorsed on the outside of the envelope. Each proposal must be accompanied by cash, draft or certified check payable to the order of "State of New York, Commissioner of Taxation & Finance" for the sum as specified in the advertisement and the proposal. The retention and disposal of the bidding check, the execution of the contract and bonds shall conform to the provisions of the Highway Law, as set forth in "Instructions to Bidders."

When optional types are permitted on contracts with federal funds, bidders must state in the space provided in the proposal the exact designation of the optional type upon which the proposal is predicated.

Minimum Wage Rate per hour for above work shall be as follows:

County	Skilled Labor	Intermediate Grade Labor	Unskilled Labor
Albany	$.85	$.85	$.85
Greene	.60	.60	.60
Nassau	.87½	.87½	.87½
Otsego	....	....	....
St. Lawrence	.90	.80	.80
Schenectady	.85	.85	.85

UNLESS SHOWN OTHERWISE IN THE ITEMIZED PROPOSAL FOR EACH PROJECT.

The right is reserved to reject any or all bids.

CHAS. H. SELLS,
SUPT. OF PUBLIC WORKS

Read the Official Proposal Columns of
ENGINEERING NEWS-RECORD
This Week and Every Week

OFFICIAL PROPOSALS

Bids: March (346)

Supply and Delivery of Shallow Boring Plants

WATER CONSERVATION AND IRRIGATION COMMISSION, N. S. W.

Tenders in envelopes plainly endorsed "Tender for Shallow Boring Plants" and addressed to the Secretary, Water Conservation and Irrigation Commission, Farrer Place (Box 2708, G.P.O.), Sydney, New South Wales, will be received up to 10:30 a.m., on Thursday, 1st March, 1945, for the supply and delivery, free on wharf or free on rails, Sydney, of from one (1) to six (6) Shallow Boring Plants. Copy of Specification may be obtained free of cost at the Commission's Head Office, Farrer Place, Sydney. The lowest or any tender not necessarily accepted. John Messner, Secretary.
(W. C. & I. C. No. 44/8580).

OFFICIAL PROPOSALS

Bids: Feb. 28 (343)

Bridge Structure

MISSISSIPPI RIVER HIGHWAY BRIDGE AT MEMPHIS, TENNESSEE—CRITTENDEN COUNTY, ARKANSAS
MAIN BRIDGE SUBSTRUCTURE
PROJECT NO. SN-A-SN-U-FAP 607-A(2), PART 1.

TENNESSEE—ARKANSAS

Sealed duplicate proposals will be received by the Department of Highways and Public Works of Tennessee and the Arkansas State Highway Commission, jointly, at Room 107, Courthouse at Memphis, Tennessee, until 10:00 a. m. Central War Time on February 28, 1945, for the construction of Tennessee-Arkansas Project No. SN-A-SN-U-FAP 607-A(2), Part 1 consisting of the Memphis abutment and the seven main piers of a highway bridge over the Mississippi River, between Memphis, Tennessee, and Crittenden County, Arkansas, and will be publicly opened and read immediately thereafter in the City Council Chamber in the Courthouse, Memphis, Tennessee.

The work to be performed under this contract will consist principally of the construction on the Memphis bank of a stone-faced abutment anchorage and connecting retaining walls, the construction of four pneumatic caisson founded stone-faced main river piers in the navigable section of the river, and the construction of three caisson founded stone-faced piers on the Arkansas bank, all of which support the main superstructure over the Mississippi River, as shown on the contract plans.

Bidders will be required to file with their bids duplicate financial, equipment and experience questionnaire forms made out in detail, which forms will be furnished with bid blanks.

A bidder's bond in duplicate in the amount of $250,000, payable jointly to the Department of Highways and Public Works of Tennessee and the Arkansas State Highway Commission on the forms furnished with the proposal, will be accepted by the States only from a surety or sureties qualified to do business both in Tennessee and Arkansas and holding certificates of authority from the United States Treasury Department and conforming to the limitations of the last published Treasury statement on acceptable sureties.

Plans, specifications and contract documents, together with forms, questionnaires and necessary information, are open to public inspection at the offices of the Department of Highways and Public Works of Tennessee, Nashville, Tennessee, and the Arkansas State Highway Commission, Little Rock, Arkansas, and of Modjeski and Masters, Engineers, State Street Building, Harrisburg, Pennsylvania, and at Room 107, Courthouse, Memphis, Tennessee, and may be secured from Modjeski and Masters, Engineers, State Street Building, Harrisburg, Pennsylvania, upon a deposit of $20.00 per set.

A refund of $10.00 per set will be made by Modjeski and Masters upon the return in good condition to them of the copy so obtained.

The opening of bids is contingent on authorization by the War Production Board of beginning of construction, together with the granting of the preference ratings and allotments of critical materials for the work. If such authorization is not issued by the time specified for the opening of bids, all proposals will be returned unopened to the respective bidders.

No bid may be withdrawn after having been deposited or filed.

The right is reserved to reject any or all bids and to waive all technicalities.

DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS OF TENNESSEE
C. W. PHILLIPS, Commissioner
ARKANSAS STATE HIGHWAY COMMISSION
J. H. CRAIN, Chairman

OFFICIAL PROPOSALS

Bids: Jan. 23 (341)

Notice to Lighting Fixture Contractors
Federal Works Agency Project Conn. 6-104

The City of Hartford, Owner

Sealed bids for LIGHTING FIXTURES for the Isolation Hospital Building at the Municipal Hospital, 2 Holcomb Street, Hartford, Connecticut, F.W.A. Project Conn. 6-104, will be received by the Board of Contract and Supply, City of Hartford, at the office of the Mayor, Municipal Building, 550 Main Street, Hartford, Connecticut until eleven-thirty (11:30) o'clock, A.M., Eastern War Time, Tuesday, January 23, 1945 and then at said office, publicly opened and read aloud.

The Information for Bidders, Form of Bid, Form of Contract, Specifications, and Forms of Bid and Performance Bonds may be examined at the office of the Architect, Ebbets & Frid, 15 Lewis Street, Hartford, Connecticut, and copies thereof obtained upon payment of Ten Dollars ($10.00) for each set. Any bidder, upon returning such set promptly and in good condition, will be refunded his payment, and any non-bidder upon so returning such a set will be refunded Five Dollars ($5.00).

The City of Hartford reserves the right to waive any informalities in or to reject any or all bids not deemed to the interest of the City.

Each bidder must deposit with his bid security in the amount of ten per cent (10%) of his bid with a minimum amount of One Hundred Dollars ($100.00) in the form and subject to the conditions provided in the Information for Bidders.

No bidder may withdraw his bid within 30 days after the actual date of the opening thereof.

A satisfactory surety bond for 100% of the contract price will be required of the successful bidder.

BOARD OF CONTRACT AND SUPPLY,
By Paul J. Wittmann, Secretary
Date—January 8, 1945

(U. S. Government)

UNITED STATES DEPARTMENT OF THE INTERIOR, Bureau of Reclamation, Washington, D. C., December 21, 1944. Sealed bids (Specifications No. 1090) will be received at the office of the Bureau of Reclamation, Yakima, Washington, until 10 a. m., January 27, 1945, and then publicly opened, for furnishing labor and materials and performing all work for the *construction of earthwork and structures, Yakima Ridge canal, station 4712+95.7 to station 5288+95.5, and wasteways Nos. 6 and 7, Roza division, Yakima project, Washington.* The work is situated from 7 miles to 14 miles northeast of Prosser, Washington. The principal items of work and the estimated quantities involved are as follows: 146,000 cubic yards of excavation, common, for canal; 42,000 cubic yards of excavation, rock, for canal; 10,000 cubic yards of excavation for core banks; 14,000 station cubic yards of overhaul; 15,000 cubic yards of compacting embankments; 1,100 cubic yards of excavation, common, for drainage channels and dikes; 200 cubic yards of excavation, rock, for drainage channels and dikes; 2,400 cubic yards of excavation, common, for channel change and road embankment; 400 cubic yards of excavation, rock, for channel change and road embankment; 20,500 cubic yards of earth lining of canal; 1,000 cubic yards of gravel blanket on inside of canal embankment; 15,000 cubic yards of excavation, common, for structures; 6,700 cubic yards of excavation, rock, for structures; 10,000 cubic yards of backfill; 1,000 cubic yards of compacting backfill; 1,725 cubic yards of concrete in structures; 3,800 square yards of dry-rock paving; 200

(Continued on page 23)